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MY VINEYARD

AT

LAKEVIEW.

BY

A WESTERN GRAPE GROWER.

NEW-YORK:

ORANGE JUDD & COMPANY.

41 PARK ROW.

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M99

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CHAPTER I.

THE SUGGESTION.

* * * "On my way home," wrote a friend, "the incidents of my little visit in Lakeview came naturally to mind. The quiet and unostentation, and the evidences of genuine contentment which were apparent on every hand, presented pleasant pictures for contemplation. And not least among them was the satisfaction, I might almost say delight, with which you worked among your vineyards, with their rich treasures of purple fruit. Calling this to mind, and coupling it with your substantial success, the suggestion presented itself, 'why should he not make a book giving a record of his experience?' 'Because,' say you, 'not authorship, but farming is my vocation.' True; but rhetoric, and nicely rounded periods, and grand displays of words are not wanted—only a 'plain, unvarnished tale,' a simple record of methods and ways; but all the better

if occasional glimpses of Lakeview and its surroundings are revealed. 'But what are the benefits to be attained?' you ask. I know not, surely; they may be few or many; but are there none who can be guided by your experience to a success equal to your own? As I write these lines, and call to mind your employment and your home, I almost wish I too had laid aside the rule and stick in the earlier years, and taken up the knife and spade. And even the question comes, 'Is it now too late?' Perhaps your 'record,' when it reaches me, will afford an answer."

So I pondered the suggestion which my friend had made; and acted upon it when the long winter evenings had come.

CHAPTER II.

MAKING A CHANGE.

Twelve years have passed since I planted my first vine. I commenced under difficulties, and have met with some discouragements. But my labor and perseverance have been well rewarded in the success which I have attained. To be sure, I might have reached the same results in half the time had I commenced with a better knowledge of my subject. Many errors into which I have fallen might have been avoided, and needless expenditures of time and money saved. In looking back upon my experience, I can now see where better methods might have been pursued. I can see wherein a little knowledge might have saved many losses, and much discouragement. The information which would have enabled me to avoid these losses, I believe I can now impart to others. Nothing, it is true, can in any business take the place of experience; but we can frequently, when commencing a new enter-

prise, so far avail ourselves of the experience of others as to materially affect the success which we may attain. In making this record of my experience, I disclaim all efforts at fine writing. My only aim will be to give the facts in the case, in the simplest and plainest language I can command.

When I first took up rural pursuits as my vocation, I was not altogether unacquainted with the theories and principles which pertain to them. From my boyhood, I have always had a great fondness for gardening, and all labor incident to country life. When learning my trade in the village printing office, I took great delight in reading all the agricultural and horticultural exchanges. My companion apprentice, Bob, as we called him then, always thought it stupid to read papers of that kind, preferring, for himself, to follow up with great care all political controversies, and taking great delight at the complete summersaults which expert politicians (in those days) sometimes found it convenient to make. Many of these horticultural publications I took possession of, by permission of the editor, and carefully preserved. I now consider them one of the important features of my little library.

All this time I had in mind the picture of a pleasant country home, where I could employ myself in tilling the soil, and could spend the quiet evenings with my books and papers—but not alone. Some one was there who was the light of home. After all, I did not think when

looking at this ideal picture that it would ever be realized as it has been, or what a part of my very self that "light" was to become. I can only feel thankful that a kind fortune has dealt out blessings to me with so liberal a hand.

On finishing my trade, and becoming foreman of the office, I found the labor and confinement quite wearing. A short respite from work seemed necessary. Accordingly my wife and I, (we had been two years married,) made a week's visit with some country friends, who were a half day's journey by rail. The bit of rural life which this visit afforded, only served to recall and brighten up the picture of rural pursuits which I had long since drawn. June was abroad in all her glory. There were bright skies, and green pastures, and rich woods, and broad fields of blooming clover; there were contented cattle, and quiet sheep, and sleek, strong horses; there were rural sights and sounds on every hand.

When we had returned home I proposed to my wife the propriety of changing my employment in the office for that of farming. In our discussions of the subject, we did not forget that there are two sides to country life—that it is not always June. My plan was not to procure a large farm and engage in general farming, but rather to confine myself more particularly to fruit-growing, on a moderate sized farm of about forty acres. The prospects

looked so encouraging that I concluded to give up my place in the printing office, and try our fortune at farming.

I had no fault to find with my employment in the office. I looked upon the business, and still look upon it, as one of the most honorable in which a man can engage. The newspaper is, and must ever be, the chief educator of a free people. All who engage upon it are worthily employed, be they editor, contributor, or workman. No one can estimate the good which the American press has wrought for the American people. That some portions are bad, does not change the result, as they serve to give force and piquancy to the predominant good.

The wages I received were sufficient for the comfortable maintenance of myself and wife. But I could accumulate little to provide against future contingencies. No man can become wealthy by his own labor. Money being merely the representative of labor, the person who accumulates, must be able to avail himself of at least a portion of the labor which others perform. If the farmer grows wealthy, it is because, as we may say, nature works for him. He sows the seed and the plant springs forth. He gives it a little attention now and then, but when he is away, or when asleep, the plant works on, perfecting the fruit which he takes to market and sells. The trees in the orchard, the vine in the vineyard, the grain in the field, are all laborers in the employment of the farmer.

Having determined upon a change in my vocation, the next thing was to form a plan and carry it into execution. The first efforts in this direction are given in the succeeding chapter.

CHAPTER III.

GOING WEST.

"Where shall we go?" was the practical question which first presented itself. A farm in the vicinity of our native village seemed most desirable, but the prices of those for sale were quite beyond our means. A tide of emigration had long since commenced its flow towards the West. Fabulous stories were rife of the success which former residents of our quiet New England village had achieved. Some had grown rich in farming, others in trade, while others had become distinguished in politics. Little or nothing was heard of those who remained in poverty and obscurity. The inference was, that out West every one must be prosperous and rich. Nevertheless, uncertain stories of agues and malarious fevers were frequently afloat. But they were usually as indefinite as the region to which they referred. After a careful consideration of the subject, taking into account our means and the

precise objects we had in view, the most appropriate answer to the question which commences this chapter seemed to be to "go West." So I made a journey into that new and prosperous region to look us out a home. And new, indeed, did I find it, new in appearance, as also new in the ways, and notions, and practices of the people.

In my search for a place, I first visited such of my acquaintances as had already moved to the western country. This took me into several of the most prosperous States, and afforded me views of widely diversified scenery. The prairie regions were less attractive than I had anticipated. Although teeming with inexhaustible agricultural wealth, there was a monotony in the appearance of the prairies not attractive to one life-long accustomed to rocks and hills. The consideration of a healthful locality was a prominent one in my investigations. But it was a curious fact, that I could find no place which the people considered as particularly unhealthy, although neighboring localities were quite objectionable as regarded their sanitary condition. In Pekin they had the ague and fevers but seldom, but over in Sebastopol they had it almost continually. Arriving in Sebastopol, the people thought their region quite healthful—that they hardly ever had any ague; but over in Pekin they had it about all the while. I also observed that nearly every one was ready to sell out, not to return East again by any means, but to "go West." This readiness to move did not arise from any dislike to

the country, but from a habit which the great mass of American people have got into, a habit which increases in prevalence the further West we go.

This continual desire for a change of place, I consider as productive of bad results. When one is continually expecting to move, he does not take that pains to make his home pleasant and comfortable, which he otherwise would. He does not like to plant trees, and flowers, and fruit, when there are no probabilities of his reaping the rewards of his labor. Thus it is that the homes of the people present so few appearances of comfort and beauty. When the American people learn a little contentment, when they begin to make for themselves homes which are to be theirs, and for their enjoyment, then will our fair land begin to blossom as the rose.

In regard to the relative health of East and West, I may state here as the result of many years of observation and experience, that in the main, neither region has any perceptible advantage over the other.

In choosing a home, I did not lose sight of a purpose which I had always entertained of having it near a body of water. No other advantage of beauty can compensate for the loss of a water view. The angry tumult amid the storms I do not so much admire; but the calm serenity at the twilight hour, especially in the golden October days, imparts a serenity of mind which exerts a lasting and benificent influence upon all the affairs of life.

One pleasant September afternoon, I found myself in a small village in Northern Ohio, waiting until the next morning for a conveyance to take me to some relatives who were living a few miles away. Rather liking the appearance of the country, I asked the landlord if any farms were for sale in the vicinity.

"How large a farm do you want?"

"Only a small one of about forty acres."

"Wall, there's plenty of farms for sale, but you don't find many of that size. Guess Smith down on the shore has one that'll about suit you."

So I obtained the requisite directions for finding Smith, down on the shore, and set out to find him. A mile walk brought me to a place answering to the description.

I was fortunate in finding Mr. Smith at home.

"Walk in, stranger, and have a chair," was the not inhospitable salutation.

"I don't wish to make a long stop. I only came to look at your place, as I understand you want to sell?"

"I reckon I wouldn't refuse if I could get my price. Where might you hail from, stranger?"

"Connecticut."

"Wall, I came from Southern Injanny."

"How long have you been here?"

"A right smart spell—going on nigh two years."

"Don't you like the country?"

"Yaas. But there's no use always staying in one place. Setting hens never get fat."

"Which way do you want to go?"

"Out to Illinoy."

"How many acres have you here?"

"I bought it for forty; but the point running into the lake on the west side, makes it a little more."

We went out to look at the farm. The land gradually sloped to the lake. The shore was high, except in one place where it dipped down to the water's edge. The soil was mostly a clayey loam. Near the road was a small portion of heavy clay. Towards the point was some lower land with black, mucky soil. The house was a log cabin of comfortable size and appearance. It was surrounded by scattering trees of large size—mostly oak and chestnut. An effort at flower-raising was visible in the front yard. A vegetable garden exhibited a profusion of luxuriant weeds. A hovel covered with straw afforded shelter for a cow and a pair of horses. Some pigs and poultry seemed to have the freedom of the place. A wilderness of mingled raspberry and blackberry bushes clambered over a portion of the division fence. There were a few peach trees, turf-bound, but appearing vigorous. About ten acres of woods occupied the western side of the place, and extended to the point. There were a half dozen acres of meadow, and as many more where the young wheat was just making its appearance. There was a large

piece of corn, weedy, but bearing a luxuriant crop, part of which had been harvested.

About the whole place there was a pleasing appearance of prospective contentment and enjoyment. The blue waters of the lake stretched away as far as the eye could reach. A few sails were visible. The setting sun had changed into gold the few clouds which were lingering on the western horizon. Magnificent shadows were creeping from the woods. Trees and fields yet bore the rich verdure of summer. Only here and there the sassafras and red maple had put on the rich colors of autumn. I had found a home.

It was but the work of a moment to take into mind certain improvements which must be made. With some repairs the house would do for the present. The hovel must be reconstructed. The fences were to be rebuilt. But I did not dwell long on future plans.

"Do you raise much fruit around here?" I inquired.

"No, stranger; it don't pay."

"Do peaches do well?"

"Splendid; just plant yer trees, and a right smart chance of a crop comes every year."

"Are there many apple orchards around here?"

"Scarcely none. They are so powerful slow in bringing crops that people don't like to plant."

"How much is land worth around here?"

"Different prices."

"How much for yours?"

"Twenty-five dollars an acre."

"Free from incumbrance?"

"Mortgaged for five hundred dollars."

"When due?"

"Two years yet to come."

"I will take the place."

Within two days all necessary papers were drawn, and I became owner of the farm. I paid Mr. Smith five hundred dollars for his interest in the place. The mortgage for an equal amount was held by a man in the village. As five hundred dollars was all that I could spare from my little capital of a thousand, I considered it fortunate that a part of the purchase price could remain on mortgage.

On returning home, I described to my wife as fully as possible the place I had purchased. "We shall make a beautiful home of it," said she. I asked her to give it a name. "Lakeview," was the response. And by this name it has since been known to us and our immediate friends.

CHAPTER IV.

GETTING SETTLED.

The middle of October found us at Lakeview with all our household goods. The house had been vacated by Mr. Smith, and he was already on his way to Illinois. We at once set about making such repairs and changes as our taste suggested or our means allowed. We did not propose to go into extensive repairs. But a few improvements seemed desirable. In no better way can we give a strange place a home-like appearance, than by putting forth personal efforts to adapt it to our minds. Every change, which increases our comforts, brings with it a new attachment to home. A drop of oil on a creaking hinge, a shaving from a door which opens with difficulty, or from a window-sash which one can hardly lift, and a thousand other little things which are but the work of a moment, will often add more to the enjoyments of home than extensive and costly repairs.

OUR HOUSE.

We liked the house even better than we had anticipated. Its location was exactly suited to our minds. About a third of the way from the road to the lake, the land swelled into a gentle knoll. Scattered in nature's picturesque way were some twenty native trees, so far apart as not to cast too dense a shade; and in the midst of them, upon the crown of the swell, the house was situated. On the first floor were two good-sized rooms, and an addition in the rear furnished a buttery and a wood-house, the latter large enough for a stove in the summer. Above were three comfortable sleeping-rooms. The house faced towards the south, and the front door opened directly into the west-room, which was by far the pleasanter of the two. It contained three windows; the front looking across the meadow towards the road; the westerly one looked out upon the woods, but these were so broken on the left as to reveal glimpses of the western horizon; while the remaining window afforded a fine view of the lake towards the north. Not least among the attractions of the room was a large, old-fashioned fire-place in the division wall, which butted up against a corresponding one in the adjacent room. I have always had a fancy for an open fire. Nothing so cheerful as to sit beside the glowing embers of a winter's evening, while the wild winds are making merry with the fleecy snow, and call

up the memories of other days. There is the glowing fire before us, and the noisy wind without, but they seem less real than the memories of earlier years. Shadowy indeed, but once more with us, the boy companions of the long ago. Over the hills in our boyish sport, and through the groves to the clear waters of the little brook. And the old school-house, with its happy hours, and its irksome tasks, and its rewards for truant deeds. And the old church bell, now ringing out its merry peal, and now tolling, tolling. And other forms are seen, venerable and bowed with age; but these are gone to the other shore, leaving a pang which time does not efface. —

"This shall be the home-room," exclaimed my wife on surveying the room I have described; "the library, and parlor, and sitting-room, all in one. Here is just the place for the book-case, there for the lounge, and the walls will accommodate all of our favorite pictures. And this corner between the book case and the fire looks as though designed expressly for your old arm chair." And to this ordering of the "home room" I did not in the least demur.

The house needed but few repairs. A little additional mortar between the logs, newly papering all the rooms and painting the wood-work, a few repairs in windows and doors, were tasks easily performed, and we were comfortably and cosily settled in our new home. Those were happy years which we spent in the old log house. When

the foundation logs began to decay, and a new house had to be built, that dearly loved home-room was copied as closely as possible; but its peculiar air of comfort and homeliness, which we so much loved, could not be imitated in the more costly and pretentious structure. I have often wondered why the original owner of the place and builder of the house, could have left it. He must have been a man of taste, having an appreciation of the beauties which surrounded him. I learned that necessity did not require his removal. He was doubtless governed, as thousands of others are in similar cases, by the hope of bettering his fortune in some more promising locality further west.

THE BARN.

The structure used by my predecessors for the protection of their stock, was no longer of any value for that purpose. To put up a substantial building with the means I had at hand, was altogether out of the question. The only alternative was to adopt the plan quite common in many of the newer portions of the West, of putting up a hovel. The location of the old one I did not like, being in too convenient proximity to the house. A new site was therefore chosen towards the east side of the farm, where the land sloped for a little way quite abruptly, and has since afforded me a basement stable to a large and

substantial barn. To aid me in hurrying forward a considerable amount of work which I wanted to do before the approach of cold weather, I secured the services of a hired man for a month, at $12. (This amount looks very small when compared with the price paid for similar help in these times.)

The first work was to tear down the old hovel. Many of the rails proved to be sound enough to use in building the new one. But what pleased me more, was a large pile of manure, evidently the accumulation of years. The western people had no faith in that material, considering it only an incumbrance and a nuisance; but, looking upon it with my New England notions, fresh and undispelled, I regarded it as quite a treasure. To commence the structure, four posts, with crotched upper ends, were set firmly in the ground, in the form of a parallelogram, twenty feet by thirty. Through the center, a supporting ridge-pole was placed. Rails were then laid on, forming a roof. Around the sides and ends, rails were placed close together in an upright position, being set in the ground sufficiently deep to hold them in place. In a similar manner a shed was built on each side of the main structure, one with a partition for pigs and poultry, and the other for sheep and young cattle. Over the whole, several tons of straw were then placed. Nothing could afford better protection than this from cold and frost; and rain found its way through only in the severest storms. This structure,

so cheaply and easily made, served me all the purposes of a barn for four years, requiring in the meantime one renewal of straw.

FENCES AND FENCING.

The fence along the front line of the farm, bordering the street, was good. The division fences were poor and needed re-building. I found, on inquiry, that the owner of a farm is expected to build half of each division fence between himself and his neighbors. Accordingly, an agreement was entered into with the farmers on either side of me, as to the portions of division fence which I should build. The old fence was taken down completely, and such rails were sorted out as would do to lay again. When the farm was purchased, there was a fence, nearly new, dividing it into two parts. This fence I determined to dispense with, and use the rails in building the division fences. It furnished all that was necessary, besides having already furnished those used in building the barn. Two other fences were also built; one inclosing the woods with about two acres of cleared land for a pasture; the other formed a yard for cattle around the hovel.

Most farmers would have disapproved of my plan of dispensing with the division fence to which I have referred. Rather than take one away, they would have considered additional ones desirable or altogether indispen-

sable. The prevalent notions in regard to fencing, I think altogether wrong. The capital invested in fences throughout the agricultural portions of the Union, is enormous; the interest on the investment and the expenses for repairs being very large. One-half of this may be set down as so much needless expense, which might be avoided by a proper system of rotation and the substitution in many localities of soiling for pasturage. I do not propose to enter into a full discussion of this subject, but consider it well worthy the attention of every one interested in agricultural pursuits.

BUYING STOCK.

I found but little difficulty in purchasing such stock as was needed. Before commencing work on the hovel, I had bought a span of horses, having found one that suited me after two or three half days' search. They were not particularly elegant in appearance, or swift of foot, but they were strong in build and kindly in disposition. My success in this purchase was a mere matter of luck, my judgment in regard to the qualities of horses being at that time decidedly poor. Of one thing, however, — the disposition of a horse — I could always judge with a considerable degree of accuracy. A vicious man, or woman either, for that matter, may sometimes disguise their character under the mask of a pleasant smile, or a smooth

word; but a horse cannot, or at least he does not, practice such deception. He always reveals his disposition in his eye.

The requirements of our household seemed to demand the purchase of two cows, so as to secure a continual supply of milk, there being in the house a certain brown-haired boy of three years, who was possessed of a firm notion that that beverage was particularly well adapted to his wants. There were plenty of cows to be found who were to come in in the succeeding spring, but to find one who would give milk until that time, was the difficulty. By a considerable inquiry and search, a couple of cows, which seemed to meet our wants, were found and purchased. One of them, red, with a white face and one white foot, fortunately the one we most needed, being then in milk, proved a good one. The other was a brindle. I have often wondered how so much viciousness could be wrapped up in so small a hide. She would kick with the most unparalleled vehemence, on the least provocation, and without any provocation at all. No amount of so-o-o-o-o bossing, or other gentle words, or the blandest coaxing seemed to have any effect. Nor were the gentle persuasions of the milking-stool, vigorously applied, in any respect more effectual. What object she had in view, if any object there were, in making these aerial exploits, is something I never could divine. And then the

look of calmness and resignation which she continually wore, was more remarkable than all else. The physiognomy of a cow is not easily read.

I had procured some pigs and poultry by special contract with Mr. Smith. They took to the new apartments I had prepared for them with many manifestations of approval. I was particularly pleased with the air of wisdom which one of the old hens exhibited as she conducted her first explorations. Cocking her head first on one side and then on the other, now taking a step forward with great caution, and again halting for a moment on one leg, she evidently took in at one scope the whole capacities of the place. Hens seldom receive the credit to which they are justly entitled. Their general contentment and unconcern, and their manifest belief in life as a condition particularly well fitted to their enjoyment, are refreshing to contemplate. I would by no means dispense with hens, even though they were not in the habit of laying eggs. It is a real enjoyment to go out of a sunny morning in early spring, and watch them as they are demurely sunning themselves on the south side of the barn. First one wing is stretched out to bathe in the warm sunshine, and then the other. Now perched on one foot, with eyes closed in serene contemplation, and now nestled in the straw, enjoying a quiet doze. A profound and impressive silence of the whole congregation is succeeded by a general conversation. What they are talking about is not

easy to understand. Probably the weather receives a full discussion, and the particularly fine qualities of the sunshine are fully commended. Doubtless the conversation ultimately degenerates into a mere discussion of the size and other qualities of various contemplated broods of chickens.

In addition to the stock already mentioned, I purchased a half dozen sheep, at twelve shillings a head. I did not procure them with the expectation that they would prove profitable, but from a mere fancy of being the owner of as many different kinds of stock as possible. Rural life presents few more pleasing pictures than a clean and tidy farm-yard, where all kinds of stock may be seen, each exhibiting the utmost contentment and enjoyment.

Among other things purchased of the previous occupant of the place, were three or four tons of hay, and a quantity of corn, besides a good supply of corn fodder. This supply of food was sufficient for the stock during the winter.

PLANS FOR FUTURE OPERATIONS.

Before commencing the labor of making a shelter for the stock subsequently purchased, I had a general notion of a plan for conducting the farm. But I had not as yet worked it out in detail. So I set about that task. My purpose was to make fruit-growing a specialty, believing

it to be the most agreeable part of agriculture, and best adapted to a small farm. I first investigated the subject of a market for my produce. I was somewhat disappointed in finding that there was scarcely any demand for small fruits in the nearest large markets, and facilities for sending so far as Chicago were very poor. At the East, fruit-growing had already become a profitable branch of business, especially in the vicinity of all the larger places, and on such thoroughfares as afforded facilities in reaching the principal city markets. I did not exactly understand why the same business was unprofitable in close proximity to large western towns. My investigations led to the belief that quality of soil or character of climate offered no adequate explanation. The true reason in the case I have since learned, which is simply this, that the tastes of the people at that time were such that very few of the small fruits were demanded. And why? Because the supply had been so small and perhaps the quality so poor that people had not learned to consider them necessary or desirable. Now all this is changed. The tastes of the people have become educated. The increased supply has placed them within the reach of larger numbers, and thus an increased demand has been created.

Seven years ago the growers of Grapes on Kelly's Island, in Lake Erie, could scarcely peddle off their small crops at six cents a pound; this year they have sold their crops, amounting to a thousand tons at the very least,

at more than double that price, and that too, to buyers who took them at their vineyards. The law, applicable to a certain extent, which governs the demand for grapes and other fruits, seems to be this, that the demand increases as the supply increases. Even now, very few of the smaller cities and villages know any thing of the luxuries of the small fruits. But they are rapidly learning, and the day is not far distant when every village in the Union will receive, through the express or otherwise, its daily supply of luscious fruits, during their respective seasons, from regions where they can be successfully and profitably grown. The rapid strides which the business of grape-growing has made within the last few years, is well illustrated in the kind and quality of stock which nurserymen are offering to the public. As I write, the advertisement of a single nurseryman lies before me, in which more than a *half million* of vines are offered for sale; fifteen years ago it is probable that not a quarter of that amount could have been purchased in the whole Union.

The investigations which I was at that time able to make, did not assure me of the safety of planting small fruits as a principal feature in my farming. With apples, the result was different. I found that there was a good market for them in the vicinity, and that in the nearest city, about twenty miles away, the demand was far in excess of the supply. I also observed that in the few small orchards which had been planted in the vicinity, the trees

looked vigorous and healthy, and that the few which had come into bearing, bore excellent fruit of their kind. Peaches, wherever planted, succeeded admirably, bearing excellent fruit in the greatest abundance. Very few attempts were made to find a market for them; and from the prices which they brought, I concluded that my friend Smith was quite right in his assertion that "it didn't pay." I found that wheat and corn, with a small amount of stock, were depended upon as the marketable crops. In forming any plan for future operations, necessity required that I should so shape it as to allow of growing sufficient crops for immediate sale the first year, to pay living expenses. My capital was already nearly exhausted in the purchases I had made. After a full consideration of the subject, taking into account my present necessities and future prospects, I matured a plan for the next year's operations, which was outlined as follows:

"Use the wood lot as a pasture for the cows and sheep.

"Plant an apple orchard of eight acres, between the wood lot and road.

"Seed down the six acres of wheat between the house and road, so as to convert it into a lawn-meadow.

"A half acre of vegetable garden, south-east of the house, and adjoining the barn-yard on the west.

"A small flower garden west of the house, so as to be seen from the western window. (This part of the plan was made by my wife.)

"Two acres for a fruit garden east of the woods, to be worked and planted as far as circumstances will permit.

"Ten acres of corn between the barn and lake."

DEBT AND CREDIT.

At the end of the year, as is my invariable custom, I sat down and examined my accounts, so as to determine my exact financial condition. Out of the capital I had at the time I left the office, there remained unexpended $138.00. The expense of getting settled in our new home, aside from my western journey in search of a farm, was $560.00. The figures were as follows:

CASH.	DR.
To amount on leaving office	$1305 00
CR.	
By paid towards farm	$500.00
" Expense of western journey	87.50
" Moving family	79.30
" Span of horses with harness	175.00
" Two cows	38.00
" Six sheep	9.00
" Pigs and poultry	10.00
" Hay and corn	25.00
" Lumber wagon	68.00
" Farm tools	61.95
" Hired man, one month	12.00
" Household supplies	58.00
" Miscellaneous	43.25
" Amount on hand	138 00
	$1305.00

CHAPTER V.

FIRST EXPERIENCE.

The first year in Lakeview was altogether a pleasant one. Not every operation was successful, or every expectation realized; but the general results of the year's labor were satisfactory and encouraging. The bright sun of early spring filled the home-room with its cheering rays, and we watched his setting among the golden clouds beyond the woods, giving promise of an abundant year. The birds took possession of the trees around the house, and made the mornings glad with the sweetest songs. In the woods, the Liverleaf rejoiced at the new life which the warming sun had brought,—and later, the sweet Violet adorned all the pathways with innocence and beauty. The shadow of the trees, at first a mere lace-work upon the sunny ground, began to thicken with the opening buds. Gradually the leaves unfolded as the sun grew warmer, and the genial spring had passed into the maturer sum-

mer. Every day and every hour of labor only added to our love of our rural home. Our aspirations did not reach for grander things than we possessed, but being contented with our lot, we enjoyed the highest degree of happiness.

BOOK-FARMING.

The general success of my farming operations was from the first greater than I had anticipated. It was probably greater than most persons who had always been accustomed to in-door labor would have met with. This success may be taken as an illustration of the success of book-farming. I had studied the subject more or less attentively for years, and had secured all the reliable books on agricultural subjects which I could find. When commencing any operation, I read carefully all my books contained upon the subject, and thus availed myself of the experience of others. If the methods pursued by others seemed applicable to my case, I adopted them, or modified them as circumstances seemed to dictate. The antipathy which many hold against book-farming is quite uncalled for. It is not to be supposed that experience and practice are without value. They are doubtless of more value than anything which can be gained from books. But this admission does not satisfy the opponent of book-farming. He goes farther, and considers that books are useless — worse than useless. They teach only fanciful

and impracticable things. The province of the farmer is to work, not to study; to practice, not to theorize. Happily these groundless and injurious notions are dying out. Doubtless our Agricultural Colleges, when they have reached their full working condition will be of great service in hastening their dispersion. But just now much more is being done by the agricultural publications. And they, too, are learning something. They are to-day better than a few years ago. They are taking higher and more worthy position. They are beginning to employ—the best of them—talent of the highest merit, and are doing a work of incalculable value to the great agricultural interests of the nation. There is no business or profession in which intelligence and study, and careful observation, in short, the free use of brains, are more desirable or more advantageous than in farming.

PLANTING AN ORCHARD.

In this record I do not propose to dwell at length upon those subjects which are not related to my experience in the culture of the grape. I have given a sketch of my surroundings, and of some of the incidents connected with my purchase and settlement at Lakeview, that the reader may have a fair notion of my preparation for the branch of farming which ultimately became my chief occupation. Some of my plans, however, were worked out with so

much success, that I am induced to give them in the hope that they may be of benefit to those whose experience has been more limited than mine. Among them was the planting of the orchard. The first thing to be done was to secure in good season a supply of trees. My method of accomplishing this will be readily understood from an order to a nurseryman of good reputation then located at Toledo. I do not consider it a model of a business letter, but it was effectual in securing trees of the very first quality.

"Your circular, stating price and size of apple trees, is received. I am desirous of obtaining some of extra quality, and will pay you *twenty-five per cent.* in addition to the usual price if you will send just the trees I want. In the first place, I want them as uniform in size (six feet in height) as it is possible to obtain; and secondly, I am desirous of obtaining only those which begin to branch near the ground; and lastly, I wish to have the greatest care taken in digging, so that the roots may be in the greatest abundance, and as little injured as possible. Please also give the roots the least possible exposure to sun and air, and have the trees packed in the best manner." Then followed an enumeration of varieties, of which Baldwins and Rhode Island Greenings constituted seventy-five per cent. When the trees came to hand they were exactly suited to my mind. The additional price paid for them

was an investment which, no doubt, paid me several hundred per cent. of profit.

Nurserymen do not, indeed they can not, take that pains with trees that they ought to take, as long as people make *price* the only criterion in making their purchases. It is better economy to get good trees, which have received proper care and kind treatment, even at a very high price, than to get poor ones, no matter how low they may sell. The manner in which I have seen stout Irishmen, with a muscular development charming to behold, dig up fine looking trees, and then take them a mile or two in an open wagon, with roots exposed to a burning sun, is downright vandalism. Whenever practicable, it is a good way to go to the nursery yourself and pick out such trees or plants as you want, and then pay an extra price for the privilege of digging them.

The soil where I had concluded to plant my orchard was a clayey loam, possessing great natural strength. It had evidently not been very much exhausted by cropping. How to prepare it for planting was a question somewhat difficult to decide. I was at a loss how to deal with the subject of sub-soiling. I had seen luxuriant and profitable orchards in New England which had been planted without any such preparation of soil. I had, however, seen it practiced in a few cases with evident good results. From what could be learned from books and agricultural publications, and from the theory involved in the prac-

tice, I concluded to adopt it. Not having sufficient team force to accomplish the work, the deficiency was supplied by exchanging work with a neighboring farmer. The subject of drainage was also considered, and though I arrived at the conclusion that it was desirable, and would prove a paying investment, my means required that it should be deferred to a future time. The neighborhood did not afford a single sub-soil plow, nor could one be procured at the village. I was therefore obliged to have one freighted from the city.

The work of sub-soiling was accomplished with a satisfactory degree of rapidity. Neighbor Williams took the lead with a strong yoke of oxen and heavy plow, turning a narrow furrow of about ten inches in depth. He was an expert plowman, and the straight furrows which he made were quite in accordance with my notions. I followed with the sub-soiler, stirring the soil at the bottom of the furrow to the depth of six inches. Within a week the labor of sub-soiling was accomplished. The piece was afterwards dragged and cross-dragged, reducing the surface to a fine tilth. The land being thus prepared, I next staked it out for the trees, thirty-three feet in each direction. The utmost pains was taken to secure mathematical accuracy.

In order to secure the planting of the trees in their right places, a method was adopted which has been long in vogue. In a board ten feet long, a notch was cut in the

center, and one in each end. The center notch being placed around the stake, which indicated the place for the tree, a stake was driven in each of the end notches. The center stake was then taken away and the hole dug. The board being replaced with the end notches around the end stakes, of course the center notch indicated just where the tree ought to stand. The holes were dug only to the depth of the sub-soiling. A greater depth seemed unadvisable, as the sub-soil was somewhat retentive, and might serve as a receptacle for water during heavy rains. The holes were at least four feet in diameter.

As soon as the trees arrived, they were heeled in carefully near the center of the orchard. The holes being dug, everything was ready for planting. I had learned a lesson upon this subject years before. My father owned a small garden of about half an acre in our native village. He used to bestow a good deal of care and labor upon it, and among other things had a few trees. On one occasion, being called away on business to a place eighteen miles distant, he brought home with him, on his returning, a number of trees, among them a Siberian Crab, then in full bloom. This last I remember very well of helping him plant. After digging the hole of good depth and size, he filled it nearly full of fine surface soil. He then put in several pails of water, and stirred it up so as to make a thin mortar. In this he placed the tree, taking care that the mortar should surround even the smallest

root on every side. Over this some dry dirt was then placed, and over this some mulch. Not only did the tree not wilt, or loose its leaves or blossoms, but it went on as though it had not been disturbed by its removal, and actually bore a full crop of excellent fruit that same season. For fifteen years, and I know not how much longer, the tree remained luxuriant and vigorous. Concluding that this method of planting was a good one, I adopted it as a guide worthy of being followed.

A supply of water was obtained without much difficulty, by drawing it in barrels on a stone-boat. The trees and water being at hand, I proceeded with the planting. In the holes some fine surface soil was first placed, of sufficient depth to bring the tree a little deeper than it had been in the soil where it grew. The dirt in the center of the hole was made a little higher than at the edges, so that the roots, when spread out, should slope a little downwards. With a sharp knife such roots were cut off as had been injured in digging, leaving a clean, smooth surface. I then placed the tree in the hole, spreading out the roots evenly in every direction. Some of the finest surface soil was then thrown on, and worked down between the roots, so as not to leave any vacant places. A little more dirt was added, and then two pails of water slowly and carefully poured on. This settled the soil completely around the smallest roots. The holes were then filled, and the soil pressed down with the foot. As

often as two rows of trees were set, I went through with a load of partially decayed straw from the old hovel, and gave them a thorough mulching.

After planting, the trees were cut back somewhat severely. The stems were trimmed up so as to leave the lower limbs as nearly as possible four feet from the ground. In setting the trees, the heaviest roots were turned towards the west, so as to guard against westerly winds.

I may here briefly relate the result of the labor, as I shall not recur to it again. Not one of the trees died. As warm weather advanced they shot into a vigorous growth. They have been pruned but sparingly, and mostly with a view of keeping the heads as evenly balanced as possible. The trees commenced bearing in the fifth year, and in the seventh year fruit enough was sold to pay all the expenses of planting and for the land on which the orchard stood. It is now a fine looking orchard. The heads are well shaped, and low down, thus protecting them in a good degree from violent winds, and greatly facilitating the harvesting of the fruit.

I was obliged to crop the orchard the first year to corn, a practice which is altogether objectionable; but a liberal application of manure rendered it less injurious than it would otherwise have been. The orchard is now in grass, furnishing an annual crop of excellent hay; but full returns are made in stable manure, ashes and plaster.

To assist me in my summer's labor, I had secured the

services of a lad about fifteen years old, the son of a neighboring farmer. By paying the father all the wages he demanded, and giving the boy an extra amount besides, and treating him with kindness, he was satisfied and contented, and proved to be very valuable help.

A GLANCE AT OTHER THINGS.

My wife's flower-garden was a great success. She took upon herself its whole care and management, only availing herself of the assistance of Harry, the hired boy, in performing the heavier work. Some of the Balsams and Asters were very fine. Because they were more attractive and showy, they gave much satisfaction to our neighbors, who occasionally dropped in. Still these flowers were by no means the favorites of my wife. I had learned this in earlier years, when she and I were young together. I was in the habit of observing such things from a notion that the flowers which the softer sex admire, may be taken as an index of their tastes and disposition. My wife had a great fondness for Sweet Violets, and most admirably did she succeed with them by keeping them mostly in the shade. Day after day was our tea-table adorned with a little bunch of these flowers, freshly picked. Nearly every pleasant morning my wife might be seen, with gloves and trowel, working among the flowers; and there

was frequently at her side a certain brown haired boy, too often ready to volunteer his willing but not altogether judicious assistance.

But I will pass over most of the year's experiences, our butter-making, our planting and the golden harvest, our sheep, and poultry, and pigs, and only glance at the results. At the end of the year, after paying all expenses, a considerable amount yet remained from the sale of our surplus wheat and corn. It was laid aside as a beginning toward the payment of the mortgage upon the place. Thus our first year in Lakeview had been one of success.

CHAPTER VI.

NEW EXPERIENCES.

The second and third year passed rapidly by. During this time I learned many things, and unlearned some which I thought I already knew. Some of my enterprises had proved successful, while in others there was failure. On the whole, there had been progress and prosperity. I had made many improvements in the place, and had added somewhat to the amount of stock. In the fruit-garden but little progress had been made, only currants and a few strawberries and raspberries having been planted. The flower-garden had fared better, having been enriched with a good collection of flowering shrubs and hardy herbaceous perennials, obtained partly from the nursery, and partly by exchanges with neighbors. In the warm south window of the home room, many luxuriant and beautiful plants had learned to make themselves at home. Evergreens of various kinds, vigorous and healthful from

the care they received, had been scattered upon the lawn, and in appropriate places about the buildings. The brown-haired boy was no longer alone. Another one, with darker eyes, now gathered with us at the daily board. Thus the years passed on, bearing with them satisfaction and contentment. Occasionally there were dark days, tinged with discouragement and melancholy; but they passed away, and the next morning's sun shone as cheerily as ever.

A VISIT TO HERMANN.

Three years had passed since we were sat down at the door of the old log house at Lakeview. The crops of the third season were good, and promised sufficient returns to clear the mortgage from the house, and leave a small balance besides. So we thought it well to go out on a little journey from home, and see what was doing in the busy world outside. As both of us could not leave at the same time, it was arranged that I should go first, and afterwards my wife. For myself, I chose a trip to the West. Not least among the enjoyments of a journey, is the pleasure of the return; home, with its enjoyments and its contentment, seems all the dearer.

Bob, the friend and companion in the days of my apprenticeship, had become connected with a paper in a flourishing town in Central Missouri. So I determined to make a visit to him one of the features of my journey.

On my way thither, I chanced to stop for a little while in the village of Hermann, now famous for its vineyards and wine. I was much pleased with what I saw of grape-growing, and made up my mind that it was a pleasant occupation. Nearly every one had found it profitable, and seemed to enjoy it, as indeed they ought with such excellent fruit and wine always at hand. I investigated the subject with care, and learned what I could of the methods of culture. Much of the information seemed conflicting, and the talk about pruning and pinching, of renewals and laterals, of canes and spurs, was difficult to comprehend with any satisfactory degree of clearness. The trouble was my almost total ignorance of the subject. I had read a few articles in the papers on grape-growing, but had scarcely thought of it as a business to which my farm was adapted. The soil was unlike that which seemed to be almost universally recommended, and so far as I knew, my location was farther north than any in which success could reasonably be expected. At that time the business had been commenced, with good promise of success, in a few localities similar to mine; but I did not know of it. From what I saw in Hermann, however, I concluded to make a trial of grape-growing on a small scale, believing that if the grapes would not sell, I could make it profitable to manufacture them into wine. At all events, I would commence so moderately that a failure would not subject me to any great inconvenience. Up to

this time, I had scarcely seen any thing of grape-growing. In my native place there were but few vines, and these were not successful enough to attract attention. There was hardly any branch of horticulture or agriculture to which I was so little fitted by my studies, experience, or observation.

When my fall's work was finished, and the long winter evenings had arrived, I took down my files of papers, and commenced my work. Running my eyes over the index, I turned at once to those articles which had any thing to say on the subject of grapes. My books (some of them were old English ones) were also consulted in the same way. The result, it must be confessed, did not leave in my mind a knowledge of the subject particularly remarkable for its clearness. So far as I knew there were not, at that time, any reputable works on Grape Culture. Some have since appeared, and particularly a most excellent one, by A. S. Fuller.

PLANTING A VINE.

Early in the succeeding spring my first experiment was made in grape-growing. The place chosen was in the fruit-garden. The border ran east and west, the west end butting up against the division fence, between the garden and woods. The soil was, for the most part, lighter than in any other portion of the farm. Towards

the wood there was a considerable admixture of black soil, abounding largely in vegetable matter. "Trench deeply, and use manure in abundance," was the notion left in my mind as the result of all my research in books and papers. So all that border, six feet by seventy-two, was hand-trenched to the depth of two and a half feet, in the most approved manner. Good, well-rotted, barn manure, equal to a depth of six inches, on the whole surface of the border, was thoroughly mingled in. A liberal supply of wood ashes was also used. I had procured, through a friend, residing near one of the eastern nurseries, twelve good Clinton vines, two years old. They were received in good condition, and were carefully planted, six feet apart, early in May. They soon put forth leaves and branches, and appeared vigorous and healthy. During the first season, not knowing exactly how much or how little to prune, I compromised the matter by allowing the vines to take their own course. They made a large growth, and were green when the frosts arrived. Those nearest the woods did not appear so healthy as the rest, and had made a much smaller growth.

Fall pruning must be attended to, so the side branches were cut away, leaving the main stem two feet in height. This first year's treatment of the vine is not recommended as one worthy of being followed. The object here is to give a faithful record of experience; those methods which were found successful will be described farther on.

After pruning, the vines were laid down and covered with straw. In the spring I concluded to allow two canes to each vine, and to keep them tied to stakes. Accordingly, a stout stake was placed at each plant. Every bud on the old cane produced a shoot. All but the lower ones were cut away. Those left grew luxuriantly, and presently some flower clusters appeared. The laterals were stopped after making a foot's growth. But others pushed out to supply their places. The behavior of the vines was altogether different from any thing which had been anticipated. They could not be brought into the shape I thought necessary and desirable. By the middle of the season, the vines presented an inexpressible jumble of leaves and laterals, large fruit and small fruit, and even flowers. In the fall, some of the older clusters colored, and I picked them for ripe fruit. It was any thing but palatable. I made up my mind that grape-growing at Lakeview could not be regarded as strikingly successful.

CONTINUED EXPERIENCE.

When I recalled to mind the appearance of the vines at Hermann, and then considered the appearance of my own, I concluded that there must be some difficulty in my system of grape culture which I did not understand. I observed that the luxuriance of the vines seemed quite disproportioned to the size which ought to be maintained.

This suggested that the soil of the border was richer than it ought to be. The vines nearest the woods made but little growth, and appeared unhealthy. I did not think that the slight difference in the quality of the soil would account for it. It seemed more reasonable to attribute it to the fact that the border was a little lower at that end, and the soil inclined to be somewhat wet.

After a full consideration of the subject, I concluded to continue my efforts at grape-growing, making something of a change in my methods and practice, with the hope that better results might be reached. I concluded, also, not to confine myself to the Clinton, but try other varieties which were receiving commendation in various portions of the country.

In order to determine whether the dampness of the soil made the difference in the vines already established, a main drain was run from the fruit-garden to the lake, and lateral drains put in, so as to secure the perfect drainage of the border. The natural slope of the land was such as to render its drainage no difficult matter, but it cost a good deal of trouble to procure the tile. As I had seen a considerable underdraining before, and believed in it on general principles, I concluded that the benefit to the fruit-garden would cancel all expense, even though no good came of it so far as the grapes were concerned.

Early next spring, a border was made, large enough for two dozen vines. One half of it was prepared exactly as I had prepared the first one; the other half was trench-spaded to the depth of sixteen inches. The subsoil was not brought to the surface, but merely loosened. A half dozen plants each of Catawbas, Isabellas, Concords, and Clintons, were procured and planted six feet by eight, in such a manner that one half of each kind was on each of the two differently prepared divisions of the border. The Clinton was included in the experiment so as to give it a fairer trial.

It will not be necessary to give a detailed statement of all the steps taken in carrying forward this experiment. A glance at the results will be sufficient. They were valuable in this, that they served as a guide for future and successful operations.

During the first year, the vines made a good growth. I gave them pretty much their own course, except that they were kept tied up to stakes. There was a decided difference in the appearance of the vines on the different portions of the border, those on the manured portion making much the larger and more luxuriant growth. The others, however, ripened their wood much more thoroughly. The Clintons on the old border, next the woods, appeared more healthy than during the previous year. The vines on the new border were pruned back to two buds, and cuttings made of all the well-ripened wood.

MORE ENCOURAGING RESULTS.

During the next year, there was a still greater difference in the comparative luxuriance of the two lots of vines. The same method of pruning was pursued that had been attempted on the first Clintons. On the unmanured border I met with pretty good success with all the varieties except the Clinton. With this I succeeded better than before, but the results were nevertheless anything but satisfactory. Next to the Clinton, the Concord was most difficult to manage. On the manured portion, I experienced but little trouble with Isabellas and Catawbas; with the Concord there was some difficulty; but the Clinton seemed perfectly incorrigible.

All of the vines bore fruit. On the unmanured border, the fruit was reduced to one bunch on each cane; the grapes ripened thoroughly, were of good flavor, and in every way equalled my expectations. I regarded this result with no small degree of satisfaction, even of delight, because I looked upon it as an indication of future success. On the manured border the vines manifested a less disposition to fruit, and the one bunch allowed to each cane did not ripen so thoroughly, or become so sweet and palatable as those on the other border. This was particularly the case with the Catawba. The benefit to the Clintons on the old border, from the underdraining, was more marked than it had been the year before.

ARRIVING AT A CONCLUSION.

On carefully summing up all the results, the conclusions arrived at were, that the Clinton was not a desirable grape for my locality; that deep trenching and a heavy application of manure was not only unnecessary, but injurious to the production of grapes in soil like mine; that underdraining was a necessity where the soil inclined to be wet; and that the Isabella and Catawba were the most desirable varieties. Basing a plan of operations upon these conclusions, I proceeded to carry it into practice. How this was done, and the results which came of it, will be recorded in the succeeding chapter.

I may state here that while engaged in my first experience in grape culture, I read with care all that appeared in the papers upon the subject, being now better able to understand what was said than I had been before having even a limited practical experience. Conversation was also entered into with any person I chanced to meet who had any knowledge of the subject, either from experience or observation. In this way almost as much was added to my knowledge of grape culture as had been done by four years' of experience.

CHAPTER VII.

PLANTING A VINEYARD.

DEFINITION OF TERMS.

Before commencing a record of my experience in the planting and management of a vineyard, I will endeavor to give an explanation of the terms used in talking of vines, that will be plain to those who may not be fully acquainted with them. If put in the form of directions for drawing a diagram of the vine, it will be all the plainer. With paper and pencil draw a horizontal line near the bottom of the sheet, to represent the surface of the ground. Below this line, proceeding from a given point, draw a few irregular lines, to represent the roots of a plant, and from the same point above, draw a vertical line, say six inches long. This we will call the *stem*. Every half inch, from the bottom of the stem to the top, alternating from one side to the other, make a character to represent a *leaf*. The place where a leaf joins the stem, is

called the *axil* of the leaf. On the side of the stem, directly opposite each leaf, draw a short line to represent a *tendril.* In the axil of each leaf, make a large dot to represent a *bud.* As the vine continues its growth, these buds will throw out branches which will be exact imitations of the stem already drawn, with tendrils, leaves, and buds. These branches are called *laterals.* When young and tender they may easily be nipped off with the thumb and finger, which is called *pinching.* The stem is usually called a *cane.* Sometimes, and especially when a vine is severely pruned, branches will proceed from buds formed at other places around the joint of a stem, than in the axils of leaves. These are said to come from *accessory* buds.

SOIL AND ITS PREPARATION.

The spot chosen for the vineyard, one acre in extent, was on the east side of the farm, and near the lake. The location was selected more on account of the facility with which it might be underdrained than for any other reason. The high shore of the lake, affording suitable outlets for the drains, and the gentle slope of the land, rendered the drainage a comparatively easy task. The soil was a clayey loam, in some places quite heavy. After the drainage had been completed, (the drains being twenty-four feet apart) a moderate coating of manure was applied, as it was necessary to crop the vineyard the first year. This is

not considered as a desirable practice, but my limited means required it. The soil was prepared by plowing and subsoiling, in the same manner as for the apple orchard. After thoroughly dragging, all was ready for setting the stakes. To accomplish this, a stout line was stretched across the field; on this, six feet apart, short pieces of white string were tied, so securely as not to slip along the line in either direction. This served as a guide for setting the stakes, and greatly facilitated the operation, besides securing accuracy. My own woods furnished a partial supply of stakes, the rest being procured by purchase. They were eight feet long, and were set two feet in the ground. Holes were first made with a crowbar, and the stakes then driven firmly down with a maul. When one row was set, the line was moved six feet, the string again serving as a guide. On the acre I set thirty-four rows of stakes, thirty-four in the row, giving place for one thousand one hundred and fifty-six vines. Every thing was now ready for planting.

PLANTING AND FIRST YEAR'S CARE.

The cuttings put in two years before had now made strong and vigorous plants. As there were not enough of them, a quantity was procured from a nursery. Those grown myself were best. Being yet in doubt as to which variety would prove most successful, I planted two hun-

dred Concords, and for the rest, an equal number of Catawbas and Isabellas. The holes were dug throughout the whole field, on the south side of the stakes, before commencing to plant. They were about ten inches deep, and twenty-four in diameter, and dug in such a manner as to bring the stake in the hole, but near the north side. Before planting, the long, sprangling roots were shortened, so that none of them were more than fifteen inches in length. The stems were shortened to two buds. Fine surface soil was placed in the holes, putting it a little deeper in the center than at the edges. On this the vine was placed, with the stem three inches from the stake. The roots were evenly spread out in all directions, and as the soil was highest in the center of the hole, they sloped somewhat towards the outside. Fine soil was then thrown on and worked in by hand among the roots. The holes were then filled, and the soil pressed down with the foot. When all was finished, the roots at the base of the stem were about three inches below the surface of the soil.

When the buds had started, and the branches had become a foot long, I went over all the vines and cut off the upper branch and old wood down to the lower branch, where the latter was the stronger of the two. When the upper one was very much the more vigorous, that was left. The only attention given the vines the first year was to keep them tied up to the stakes. The ground was kept clear of weeds, the first crop of turnips obtained

more than paying the expense of cultivation. A few of the vines died, but nearly all made a good growth. In a few instances some of the laterals had become longer than the main stem, but in almost every case the main stem was large and well developed at the base. Nearly all the vines shed their leaves before the arrival of frosts, and the wood appeared to be well ripened. About the middle of November the vines were cut down to within a foot of the ground, and cuttings made of such wood as was suitable for that purpose.

GRAPE-GROWING CONTAGIOUS.

During this, my first year of planting grapes to any extent, several of my neighbors made a commencement in the business. The different branches of agriculture and horticulture may be considered as contagious. This explains in part the fact, that we almost always find the different branches confined to specific localities, while there are other localities, equally advantageous as regards soil, climate, and market, where they are not found. Thus we find hop-yards, peppermint farms, fruit farms, etc., clustered in little circles here and there, throughout the country. I had caught grape-growing at Hermann; my neighbors were taking it of me. At this I was not a little gratified, believing that their success would only enhance my own. Hence I was ready to give any information

which I possessed, and to allow every one the full benefit of my experience.

THE SECOND YEAR.

In the spring of the second year, I rubbed off all the buds on the stem which were within six inches of the ground. Two canes, one from each of the two nearest buds above this, were allowed to grow. They were stopped when they had reached the height of the stakes. The laterals were stopped when they had reached a length of a foot, and again stopped after every one or two additional leaves. One bunch of fruit was allowed to each cane, all other flower clusters being taken off as they appeared. The soil was kept mellow and free from weeds, the horse cultivator being easily used, as the vines rowed both ways. Nearly every vine produced two well ripened bunches of fruit. Besides using all we wanted in the family, and offering it liberally to our neighbors, as they came in to see our progress in the new business, four hundred pounds were sold, which netted about twenty-five dollars. They were sent to the city, and sold on commission. Grapes from other localities were also sent to the same place in considerable quantities, but the demand was fully equal to the supply. I judged from this that a ready market could be found there or elsewhere, for all the grapes which would be likely to be grown for some years to come. Should the result prove otherwise, wine-making

might still be tried. Hence no uneasiness was felt about disposing of my grapes at remunerative prices.

Some difficulty was encountered in getting the grapes to market, for want of suitable boxes in which to ship them. The ordinary grape boxes, now so common, could not then be procured in my locality. This trouble was overcome by making crates out of lath and boards. Two boards, twelve by eight inches, were taken for the ends; lath were nailed on, one half inch apart, to make the bottom, top, and sides. The crates were two feet long, and were lined with stout brown paper. In them the grapes reached the market, about twenty-five miles by rail, in good condition. As I have stated, only one bunch of grapes was allowed on each cane. Probably double this amount might have been grown without any injury; but being desirous of obtaining strong vines, I determined not to defeat the object by over-cropping. In November the canes were all cut down to two buds each.

MAKING PROGRESS.

The second year of my vineyard had now drawn to a close. The labor of tending had been much less than I had anticipated. My wife frequently went out of her own choice and assisted at the pruning, but I was glad to see that her flowers were by no means neglected. The brown-haired boy was also on hand, freely offering his as-

sistance; but, as a matter of caution, his pruning exploits were confined to wood which had already been taken from the vine.

Lakeview, at least its occupants thought so, was increasing in attractiveness and beauty. The evergreens were growing rapidly, and the occasional use of the pruning shears was effectual in producing symmetrical forms. The apple orchard had become all that could reasonably be expected, and the little collection of strawberries, blackberries, raspberries, and currants, offered its bounty of delicious fruits. The stock had increased in amount, besides having brought a small revenue from some which had been sold. A frame barn, suited in size and arrangement to the extent of the farm, had been built. Our expenses were less than our receipts. We were not growing rich, but as we felt that every reasonable want was gratified, it took no effort to make ourselves contented with our lot.

THE THIRD YEAR.

The next year, four canes were produced on each vine, one from each of the four buds left at the last season's pruning. The canes were stopped at the top of the stakes, and the lateral received the same pruning as during the previous year. Two canes were allowed to fruit, bearing three bunches each. From the other two canes, all flower-clusters were removed as soon as they made their appear-

ance. The grapes were sold to better advantage than those of the previous year, the crop bringing me over a hundred dollars. Deducting all expenses of tending, and allowing a fair interest on the cost of the vineyard, I found, that even this return was more profitable than any other crop which could have been raised. The fall pruning this year consisted in cutting down to one bud the two canes which had fruited, and cutting off the laterals on the other two within an inch of the canes, being careful not to injure the buds at the base. Two canes, each about six feet long, were thus left on each vine. A part of these I laid down on the ground and threw a little soil over them; the others were left tied to the stakes. Since the first year, when the dozen Clintons were protected with straw, I had protected only a small part of the vines, and that part only with soil. The difference between those which were protected and those which were not, was frequently imperceptible; but, where any difference appeared, it was in favor of the protected vines.

THE FOURTH YEAR.

The next spring, as soon as the buds began to swell, the two canes were securely fastened to the stakes. Each cane produced ten bunches of fruit, two from each of the five lower branches. The branches were stopped at two leaves beyond the second bunch of fruit, and if more

flower-clusters appeared, they were taken off. Two new canes were produced from the buds left for that purpose at the base of the canes cut away the year before. Their treatment was the same as that already described, except no fruit was allowed to grow.

In the fall, there were four canes to each vine, two of them grown the year before and now bearing fruit; and two others grown the present season. Over three hundred and fifty dollars worth of grapes were sold from this acre of vines, besides which a half barrel of wine was made by means of a small press, extemporized for the purpose. The fall pruning consisted in cutting down to the last bud the two canes which had borne fruit, leaving the other two for next year's crop. The vineyard was now fully established.

OBVIATING A DIFFICULTY.

One difficulty, however, presented itself. The four canes to a single stake were so crowded as to interfere with pruning, and what was a still greater objection, some of the leaves shaded others so much that the latter could not perform their proper work. This trouble was remedied in the following manner: — I obtained from a saw-mill, where they had a buzz saw for making lath, a quantity of slats, about inch by inch, and nine and a half feet long. These slats were fastened to the stakes with a six-penny nail, one end of each slat at the bottom of a

stake and the other end at the top of the next stake. To these slats the growing canes were fastened during the next year, one to each, while the two fruiting canes were fastened to the upright stake. By this means the pruning became an easy task, and could be performed with the utmost rapidity, while there was an abundant exposure to sun and light of all the leaves, both on fruiting and growing canes. The system of pruning, already described, was not changed — the use of the slats simply obviating the difficulty already mentioned, the crowding of too many canes upon one stake.*

THE FIFTH YEAR.

During the fifth year the vineyard had come into full bearing. Many of the canes produced twenty-five bunches of grapes, some of the upper branches bearing three bunches each. This gave fifty bunches to the vine. Of course, all of the vines did not produce this number. I did not keep an exact account of the product of the vineyard, as other vines, subsequently planted, had commenced to bear, and no separate account of the fruit was kept. There must have been, however, a clean profit of at least two hundred and fifty dollars, on this one acre of vine. The yield of fruit did not fall short of nine thousand pounds; but all of it was not suitable for packing, as

* A cut, showing the appearance of vines trained on this method, is elsewhere given and explained.

only large and perfect bunches were used for this purpose. The rest of the crop, after picking the table grapes, was made into wine. One of my neighbors, who was the first to follow me in the grape business, and who had more capital and perhaps a little more enterprise than myself, had built a wine press and a small wine cellar. He made his entire crop into wine, but I found it more profitable to pack such of mine as were suitable for that purpose. My wine grapes were worked up at his establishment, on shares.

ACTS AND FIGURES.

At the present writing, I have five acres of vines in full bearing. It would be quite difficult to give a statement of the profits of the crop which would be accurate to the nearest cent, but the following figures, in round numbers, are within a few dollars of accuracy. No separate account has been kept of the labor bestowed upon the vineyard, it having been performed along with the other farm work as necessity required. After a vineyard is established, it is a pretty accurate calculation that five acres will require the labor of one man, with some extra assistance at picking time, and perhaps a little at the summer pruning.

The figures given, are for 1865. It will be seen that the grapes are credited at ten cents per pound, but many of the Catawbas sold for twelve and a half cents. No account is made of the wood cut away at the fall prun-

ing, which is just now of some considerable value. Most of it has been sold for cuttings. I have also derived considerable profit from the sale of plants, grown from cuttings, at little trouble or expense.

The yield per acre is perhaps a fair average one, where the crop is not injured by rot or mildew, as has been the case in many vineyards the past season. I have known a small vineyard to return its owner at the rate of over two thousand dollars per acre. This is, of course, an extreme case

VINEYARD OF FIVE ACRES.	DR.
To interest on cost, 10 per cent. on $400 per acre.,	$ 200 00
" wages of one man, a year	500 00
" extra help in picking	200 00
" boxing 5000 lbs. per acre, at 1 cent	250 00

CR.		
By 5000 lbs. Table Grapes, per acre at 10 cts	$2,500 00	
" 3000 lbs. Wine " " " 5 cts	750 00	
Add profits, at $420 per acre		2,100 00
	$3,250 00	$3,250 00

It will be seen from the foregoing, that my experience in Grape Culture has been a successful one. To many it may not appear large, but to me, it is quite satisfactory. Indeed, my whole experience in farming has been so gratifying, that I feel thankful to the fortune which led me to take up my abode in Lakeview.

In the future pages of this work I shall not continue to relate my experiences in the order of their occurrence, but shall combine them with some remarks upon the theories of Grape Culture, and directions for its practice. I shall hope to make these directions so plain that any, who may desire to turn their attention to Grape-growing, can follow them to a satisfactory success.

CHAPTER VIII.

PROPAGATION OF THE VINE.

There is perhaps no plant which man has subjected to cultivation, more easily propagated than the grape. Five different methods can be pursued with success, but of these, only one is in general use in out-door propagation.

1. By Seed.—This method of propagation is used only for the production of new varieties. It receives but little attention, because of the uncertainty of its results. Of a thousand plants, raised in this way, perhaps not one will have any merits superior to those of its parent. Nevertheless, as this is the only way in which new varieties can be obtained, every one who is interested in Grape Culture, should give as much attention to it as circumstances will permit. There is already a large number of excellent varieties, but it is not to be supposed that the highest attainable perfection has as yet been reached.

In selecting the seed, they should be sound and thoroughly ripened, and only of the best varieties. It would be only lost time to take seeds from wild varieties, as some have recommended. It would be like going back to the beginning of the road, when you are alreadv a good piece towards the end of the journey.

The soil in the bed should be deeply worked, and enriched with thoroughly rotted manure, if it should be required. Leaf mould, from the forest, is a very suitable manure for this purpose. The best time for sowing is in the fall. The drills may be fifteen inches apart. The seed should be sowed pretty thickly, and covered about a half inch deep. In the spring, when the plants are about three inches in height, they should be thinned to three inches apart in the rows. Brush may be put in as in brushing peas, for the vines to climb up on. The surface of the bed should now be thoroughly mulched with coarse litter, after which the vines will require no further care during the season.

In the fall, the plants may be dug up and the long roots cut off, to within six or eight inches of the stem. The stem may be cut back to two buds. The plants should be carefully heeled-in for the winter, and the soil drawn up around the stems so as to completely cover them.

The next spring, the plants may be put out, where they are to grow. They should be in rows five feet apart, and three feet apart in the rows. If there is an abundance

of room, still greater distances are desirable. A stake must be placed at each plant, and the vines kept tied as they grow. The first and second seasons, it is better to allow only one cane to each vine, and it is necessary to keep it within moderate limits by pinching in the laterals, and stopping the main cane at a foot or two beyond the stake.

During the third and fourth years, each vine may produce two canes, which should be treated like those of the previous years. In the fourth year, and occasionally in the third, the vines will begin to fruit. This will enable you to judge with some degree of accuracy as to the result of your labor, whether it is all lost, or whether you have obtained a new variety of value. Of a thousand plants, perhaps none will be like the parent; probably many will be inferior, but the vast majority will doubtless have a sum total of qualities which make them neither better nor worse, while a few may have some, perhaps all of their qualities, superior to those of the parent. These should be saved for further trial, while all others may be at once destroyed. It will take many years to determine positively as to the quality and value of a new variety.

What is most needed just at the present, in a new variety, is the combination of *earliness* with the qualities which many of our best varieties already possess. Such a grape could be grown farther North than any we now have, and

would be desirable in localities where the crops of the present varieties are occasionally injured by early frosts. Whether or not the Iona, which has been produced by great labor, and which now promises so much, will supply this want in every particular, can be positively determined only by still farther trial.

2. Layering. — There is no method of propagation which will produce so strong and vigorous plants, as layering. To produce plants by this method, wood, which is either one year old, or of the current season's growth, may be used. About the first of July select a shoot, which is strong and vigorous, and bend it down to the ground, being careful that the curve is not too abrupt. At the point where the cane touches the ground, cut it about half way through, from the upper side, with a slanting cut. Dig a hole, about three inches deep, and fasten the cane into it, so that the cut shall come in the bottom of the hole. A hooked stick may be used to fasten down with. The hole may now be filled, and the soil pressed down. The portion of the cane beyond the point layered, may be tied up to a stake. The layer will soon throw out roots, and may be detached from the parent plant in six or seven weeks. It will now be a strong plant, ready to set out where it is to grow. Should it be set out early enough to become somewhat established before the approach of winter, it would probably bear fruit the next season, though it would not be desirable for it to do so.

3. Cuttings.—This is perhaps the most generally available of all the methods, and may be practiced by every one with the utmost ease. It is the method by which I produced all the plants used in setting my vineyards, except a portion of those on the first acre. Only well ripened wood, which may be known by its firmness of texture and the bright lively color of its bark, should be used. The cuttings should be prepared in the fall. The wood may be cut into lengths of three buds each; the wood being cut away close up to the lower bud and left about an inch above the upper one. It is better to have the wood, where it is cut off, slant away from the buds, rather than towards them, and great care should always be taken to avoid injuring the buds. The cuttings may be kept, during the winter, in the cellar, laid on the bottom and covered with sand, or buried out-doors under a slight covering of soil, and protected with straw from freezing. The requisites for their safe keeping are, a temperature as cool as possible without freezing, and moisture without an excess of wet.

The cutting bed should be made in the fall, preparatory to early use in the spring. If at all inclined to be wet, it should be underdrained. The soil should be worked to the depth of sixteen inches, and thoroughly enriched with perfectly rotted and finely pulverized manure. Leaf-mould from the woods, and a small quantity of ashes, can be advantageously added. The whole bed should be

thoroughly worked over, so as to be uniform in composition.

In the spring, as soon as the frosts are well out of the way, lay off the bed into lines fifteen inches apart. With a spade, dig trenches ten inches deep, one side of which shall be smooth, and have a moderate but uniform slope. Along these sloping sides the cuttings may be placed six inches apart, in such a manner that the center point between the two upper buds shall be at the surface of the ground, after which the trenches are to be filled and the soil pressed down. The whole bed may now be mulched with coarse litter, which may be put on deep enough to come up to the upper bud of the cuttings. If the soil is dry at the time of putting the cuttings in, it may be thoroughly watered before mulching. The cuttings will soon strike root, and the stems ought to make a growth of from three to five feet the first season. If left to themselves, they will do very well; but it is somewhat better to keep the plants tied up to stakes, or pea brush may be put in for them to climb upon.

There are numerous other methods of propagating by cuttings, but the one just described, I have found to be most successful. Sometimes, cuttings of only two buds are used. In this case they are put into the soil so deeply, that the upper bud is covered about an inch. Where this is done, the upper bud not only produces a stem, but roots are thrown out from its base. In this way fine

plants are sometimes produced. Where wood is very scarce, this method is desirable, as there is a saving of one-third.

4. Single Buds.—Nearly all the plants sent out by nurserymen, are propagated from single eyes. This method requires artificial heat, but a good hot-bed will answer very well for the purpose. The wood should be selected and preserved in the manner already described for cuttings. In the spring the wood may be cut up into single eyes, leaving it about half an inch long below the bud, and three-quarters of an inch above. At both ends the wood should slant *from* the bud, because, when prepared in this way, the bud is much less liable to be injured.

Instead of ordinary soil in the hot-bed, use shallow boxes, about three inches deep, filled with clean white sand, such as is ordinarily found on the shores of lakes. Make lines across the boxes, about two inches apart. Along these lines place the buds in a slanting position, and deep enough so as to be covered about a quarter of an inch with the sand, which should be pressed down firmly. Care should be taken to keep the top of the buds towards the surface. They need not be put in until the first or second week in March. The sand should be kept moist.

When the buds have thrown out roots, and the shoots have become three inches long, they may be transplanted into ordinary soil in another hot-bed. They should re-

main here until the weather is warm and settled outdoors, when they may be transferred to a bed prepared according to the directions given for a bed for cuttings. They will need shade if the sun is hot, and water if the soil is dry. When once established, they should receive the same treatment as cuttings, started in the open ground.

One great advantage of this method it will be seen at once, is the greatest economy of wood. But another and greater advantage is the facility with which many varieties are started, that can be multiplied in other ways only with the greatest difficulty.

5. Grafting. — In modern times the grape is seldom propagated by grafting. The process is not a very difficult one, but other methods are so much more available, that there is little advantage in employing it. Some varieties, as the Diana, which cannot be increased by ordinary cuttings in the open ground, can be readily propagated by grafting. Nevertheless, even in the case of these varieties, this method is no more certain, and not nearly so available as that of single buds, or eyes.

The only method of grafting in which I have had any experience, and a very simple and effective one, is one which was first described in the *American Agriculturist.* A vigorous shoot of the vine, which is to be used as the stock, is bent down and fastened into a hole in the ground,

in the same manner as for layering; only instead of a notch on the upper side of the cane, make a slit directly through the center of the cane from top to bottom. The slit may be about an inch in length. Select good strong cions, which should have two buds upon them. From the lower bud downwards, and flat-ways with the bud, make the cion wedge shape, say two inches in length. Cut the cion off, about two inches above the upper bud. Now take the cion and insert it into the slit, up to the lower bud. The hole may now be filled with soil, leaving the upper bud just above the surface. When the cion has commenced to grow, the stock may be cut off at the surface of the ground beyond the graft. Roots will soon be thrown out from the cion, at its junction with the stock. The grafting may be performed in the spring, just after the sap has commenced to flow. If the cions have been kept in the cellar, and are dormant at the time of insertion, so much the better.

This is, in reality, a modification of the method of propagating by cuttings. But many varieties, which can not be increased by ordinary cuttings, may be easily increased by the method just described. The reason is, that the cutting is supplied with abundance of food, the sap of the stock, to grow upon until it has thrown out roots of its own.

The ancients were very skillful in grafting the vine, and employed it very extensively as a means of propagation.

It is probable that they understood the art in all its branches much better than we of modern times.

6. Hybridization.—This operation is employed for the purpose of producing new varieties. It consists of impregnating the flowers of one variety with the pollen of another, in the hope that the good qualities of the parents may be transmitted to the offspring. Thus, if we have one variety which is early and hardy, but the quality poor, and another variety of good quality, but too tender for out-door culture, by making a cross between the two, we *may* get a new variety which combines the good qualities of one parent with the hardiness of the other. The seed of the fruit which results from the flowers, after receiving the cross impregnation, are planted and fruited in the manner described under the head of propagation by seed.

CHAPTER IX.

SOIL AND SITUATION.

WIDE ADAPTATION OF THE GRAPE.

The grape is adapted to the widest diversity of soil, from the heaviest clay to light gravel. I have seen it growing, in its wild state, on the most rocky and rugged hill-sides of New England, and in the deep, alluvial soils on the river banks of the West. This wide adaptation of the grape, in its cultivated state, is doubtless dependent to a considerable extent upon the variety, the manner of preparing the soil, and the mode of training. And yet, so far as successful cultivation goes, the grape is confined to certain localities, which are so like other localities where it is not successful, that it would be difficult to point out the difference which causes the result. For instance, the grape may be successful on one shore of a stream or lake, while on the opposite side, or a little far-

ther up or down on the same side, it may succeed but poorly, or not at all. It can not be determined with certainty, from any condition of soil, or climate, or exposure, whether or not a given locality is adapted to the grape; it can be known positively only by trial. And even if one variety is not successful, another may be completely so. The Hartford Prolific is not highly esteemed in Northern Ohio. It is considered a good grape in Pennsylvania, but reaches perfection only in Missouri. Location has such an influence, that a variety produced in one locality would hardly be recognized as the same grape when grown in another locality, although the care and treatment might have been the same.

The grape is successfully cultivated from Maine to California; but east of the Rocky Mountains it has become a prominent business only in a comparatively few localities, of which perhaps the most prominent are Hermann, Cincinnati, shore and islands of Lake Erie, and Pleasant Valley, in New York.

LAKE ERIE GRAPE REGION.

In the Lake Erie region, perhaps the most successful vineyards are on Kelly's Island, about ten miles from Sandusky. The soil is a clayey loam, somewhat inclined to be heavy, and more or less abounding in lime, the whole island being underlaid with limestone rock. It is only a few years since grape-growing began to attract the atten-

tion of the islanders as a profitable business, although grapes have been grown there for twenty or thirty years. Six or seven years ago, good farming land was worth only from twenty-five to forty dollars the acre; now the same land, if adapted to grapes, is worth from five to six hundred dollars the acre, and in some instances has sold as high as seven hundred dollars. It will be seen from this that the profits of the business must be very large to warrant the payment of such prices.

Catawbas and Isabellas are about the only varieties grown on the Island. Most of the grapes are boxed, and sent to Chicago, Detroit, and other large cities, and even many find their way to Cincinnati. During the past season, the grapes have been selling at ten cents per pound for Isabellas, and twelve and a half for Catawbas. One cultivator sold from a half acre of Isabellas, six hundred dollars worth of table grapes, and over two hundred dollars worth of wine grapes. The fruit, however, had ripened remarkably early, and some of the first brought twenty-five cents per pound.

The land is prepared for planting by ordinary plowing. The first who went into the business used manure, but they have now abandoned the practice as worse than useless. Underdraining is generally practiced. Many of the drains are constructed of stone, which are afforded by the quarries in great abundance. The vines are trained to the ordinary post and wire trellis. The surface of the island

is level and smooth, except here and there the foundation rock crops out above the surface.

The great advantage of this locality is the influence of the lake. The ice chills the air in the spring so much as to keep back all vegetation until danger from frosts is past. During the summer the water becomes warmed, and at the approach of fall gives off its heat, so that frosts are kept back for two or three weeks. The long warm autumns which thus result, are exactly adapted to ripening the grape in its greatest perfection.

All along the southern shore of the lake are scores of localities where the grape has been found to succeed admirably. While ordinary farms are worth fifty to sixty dollars per acre, good grape land is frequently selling for about four hundred dollars. It is probable that these prices are higher than the profits of the business will warrant, especially when we take into consideration the great rapidity with which the business is increasing.

As the production of grapes becomes more extensive, and the markets are fully supplied, it can hardly be expected that present prices will be maintained. It is claimed, however, that the amount of really good grape land is so limited, that the business can not be increased to such an extent as to materially reduce the present profits. It is to be hoped that this is not the case, and I do not think it is. New regions where the grape succeeds

admirably are being continually discovered, and doubtless new varieties will soon make their appearence, which will be successful in many regions where the present varieties can not be grown. Grapes can be grown at five cents per pound, and leave a reasonable profit at that rate. They ought to be grown in such quantities that the poor as well as the rich can have them in the greatest abundance.

PLEASANT VALLEY REGION.

The grape region of Pleasant Valley presents a remarkable contrast to that of Kelly's Island. The vineyards here, instead of being on level land, are on the steep sides of high hills. In many places the land is so steep that horse cultivation is out of the question. The soil, too, presents as great a contrast. Instead of clay, we find an exceedingly stony soil, in some places appearing as though made up almost entirely of small stones, fragments of slate rock. The best of the vineyards are at Hammondsport, on the sides of hills whose bases are washed by the waters of Crooked Lake. Land on these steep hill-sides, which was almost worthless before the introduction of grapes, now commands from three to four hundred dollars an acre. Little or no manure is used, and underdraining is practiced to good advantage on land which is so steep as to suggest the idea that it could be of no possible use. Much of the land is terraced, it being so steep that it could not

otherwise be worked. The ordinary training on trellises is employed. Slats are frequently used in place of wire. Most of the grapes are shipped to New York. In some vineyards none of the grapes are boxed, all being made into wine.

Doubtless the stones, which are found so abundantly on the surface of the soil, explain to some extent the success of grape-growing in this region. They become warmed by the sun, and the heat is thrown back directly upon the vines and fruit, hastening the process of ripening. Retaining their heat longer than ordinary soil, and radiating it slowly by night, the temperature of the vineyard throughout the growing season is higher than it otherwise would be. Doubtless the water on the lake, as well as the slope of the land, which has a southern and south-eastern exposure, also exerts a beneficial influence.

As the result of my observation and experience in regard to soils, I conclude that moderately heavy clay, abounding in lime, is best, but that the grape will succeed in almost any soil when other things are favorable.

IMPORTANCE OF SITUATION.

On the other hand, I consider that the situation is the most important point of all. Those situations will be most successful where the seasons are prolonged by natural causes. Thus, at Kelly's Island, and along the south shore of the lake, the seasons are prolonged three or four weeks

by the influence of the water; while at Hammondsport equally desirable results are brought about by the increase of temperature, both night and day, from the character of the soil and the aspect of the surface. A similar influence is brought about in an artificial way by underdraining. It is because the surplus water is removed, rendering the soil warm, from the fact that evaporation from its surface is diminished, that underdraining is so valuable an adjunct of grape-growing.

PROTECTION.

Protection of the vineyard from sweeping winds is another consideration worthy of attention. My own vineyard is protected from westerly winds by the belt of woods on the west side of the farm, already referred to. Success will be met with in many localities which are thus protected, where it would not be without this protection. In such places as are not protected by natural belts of timber, artificial ones may be planted. They should be composed largely of evergreens, and only a few years are required for them to become large enough to exert a marked beneficial influence. In many sections of the West the question of successful fruit-growing is simply one of protection from sweeping winds. This is particularly so on the Illinois prairies, where they now grow peaches and other fruits in great abundance, while before planting protecting belts of evergreens, they could not be grown at

all. It is said that protection makes a difference of some ten degrees in temperature; but this is not its greatest benefit, because at the same degree, the injurious effects of cold are much more severe when the wind is blowing, than at other times.

CHAPTER X.

PREPARATION OF SOILS.

There is no one point in grape culture which demands more attention than the preparation of the soil. The first and most important requirement is that the soil should be dry. Whatever may be the case with the wild vine, those which are in cultivation, will not succeed in wet places. In the same field, within ten feet of each other, I have seen vines of the same age, some of which were luxuriant and loaded with fruit, while others were dwarfed, sickly things, without any signs of fruit at all. This difference was caused by a difference in the soil; that where the first grew being dry and warm, while the others were in a boggy place, somewhat wet, but not excessively so. The cultivated vine will not live in any place where there is stagnant water; nor will it succeed in any soil where there is an excess of moisture.

UNDERDRAINING.

Underdraining may be considered as well nigh indispensable, and I have yet to see the soil which it would not benefit, so far as grape culture is concerned. Its advantages consist in the increased temperature, amounting to ten or twelve degrees, which it gives the soil by rapidly carrying off all surplus water. This difference in temperature is, in many regions, the difference between success and failure. The drains should be put in so as to come between rows, and not directly under them. They ought not to be less than three feet deep, nor more than twenty feet apart, unless the soil is naturally very dry.

DEEP TILLAGE.

Another requirement is that the soil should be deeply worked. The chief advantage of this is the same as that derived from underdraining. The soil being open and light, the water passes rapidly through, thus preventing a decrease in temperature which would result from its evaporation. Another advantage is the readiness with which the roots of the plants penetrate the soil in all directions. I have seen some vineyards, quite successful, planted on land which had been simply plowed, as for corn; but it can not be doubted that a more thorough preparation would have produced still better results.

The soil should be plowed and subsoiled to the depth of at least sixteen inches, and afterwards thoroughly cultivated or dragged, or both, until well pulverized. Care must be taken not to work clayey soil when at all wet.

BORDERS.

More care should be taken in the preparation of a border for grapes in the garden, than for ordinary vineyards. The same attention should be given to drainage, but the soil should be worked to a depth of two and a half feet. Old and well rotted manure may be supplied quite liberally, as the grapes are supposed to be for table use, rather than for wine. The border should be in a warm, sunny locality, well protected from winds. If the grapes can be planted along the south side of a wall, but at least a foot from it, so as to receive the influence of the radiated heat, they will thrive finely.

CHAPTER XI.

MANURES.

The subject of manures is one which should receive the careful attention of every tiller of the soil. Success in farming is very often dependent upon the method employed in saving and using manures. On every farm, no matter how small, the compost heap should be an important feature. It may be managed in such a way as not to be in the least offensive, and the labor bestowed upon it will always be a paying investment. The way in which many farmers on the rich prairie lands treat their manure, regarding it as a worthless nuisance, and allowing it to go to waste, is all wrong. The consequences of this course may not be very injurious to them, but it must be to their descendants. It is folly to suppose that land, however rich, will not become ultimately exhausted by continual cropping. For myself, I am careful that no refuse matter

of any kind, either liquid or solid, shall go to waste. My methods of composting are essentially the same as those described in the works on agriculture, and in the agricultural and horticultural publications. The quantity I collect is sufficient to afford a rich feeding to my vegetables, fruits and flowers, besides a liberal supply for the lawn and orchard.

I have not as yet found it necessary to use manure in the vineyard; but it is hardly to be supposed that it can yield its annual tribute of fruit without an ultimate exhaustion of the soil. But I apprehend the grape is one of the least exhaustive of crops. The chemical constituents of the fruit, which is made up largely of sugar and water, are almost entirely found in the atmosphere. The soil is, therefore, lightly drawn upon in the production of fruit. With ordinary farm crops the case is different. Wheat, corn, and meal, abound largely in phosphates, which the soil can alone furnish. Hence these crops are rapidly exhaustive, and frequent manuring is necessary to maintain the fertility of the soil.

The soil of the vineyard, however, must furnish all the inorganic constituents of the wood of the vine. If this wood be taken away, and no return made, the soil must from this cause be gradually exhausted. This explains the reasons for the benefits which are said to arise from manuring the vineyard with chopped trimmings and cut-

tings taken from the vines by pruning. All of the earthy constituents of the soil which the growing plants have taken up are thus returned at once. It is probable, however, that the application of an equivalent amount of ashes would be fully as beneficial.

Some of the directions given for the preparation of a soil suited to the grape, by the older authors, are amusing if not instructive. In one case, after enumerating a dozen ingredients which must be used, the author slips in a caution against having any of them deteriorated by an admixture of clay! In many instances the exactness demanded in the preparation of the soil would suffice a careful apothecary in the compounding of the most difficult medicines.

If the soil is good enough to raise a fair crop of Indian corn, it will do well enough, at least for a while, without manure. If it be poorer than this, it must be manured until its fertility has reached this standard. Only the finest and most thoroughly rotted manure should be used, that which is fresh and rank, and all fermenting substances must be discarded. Lime and ashes are valuable fertilizers.

It should be remembered that any excess of manure causes an undue growth of wood, and prevents fruiting. The object for which the fruit is grown, whether for table use or for wine, should have some bearing upon the sub-

ject. If for the table, the soil may be somewhat richer, with a corresponding increase in the vigor of the wood, and, to some extent, in the size of the fruit; but where designed for wine, the saccharine matter of the fruit, so essential in the manufacture of good wine, is more largely produced on a poorer than on a richer soil.

THE AUTHOR'S METHOD OF TRAINING.

CHAPTER XII.

PRUNING AND TRAINING.

The method of pruning and training which I pursued with my first acre, is in some respects superior to any other method. It is very simple, and easily understood. No method could be better in those localities where it is necessary or desirable to lay down the vines for winter protection. It will be seen that the young growing canes can be supported by tying at any point of their growth, which is very important. With ordinary wire trellises, this is not the case, as the young cane has to grow from one wire to another before it can be fastened. In most sections, also, this method is less expensive than where trellises are employed. Another advantage is that the stakes may be put in before planting, and thus used to train to from the first. In other methods, stakes have to be put in to support the vines until old enough to train to

the trellises, when they have to be removed—all of which is lost labor.

I would recommend this method to all persons unacquainted with grape-growing, who propose to plant a few vines. It is doubtless the best method to be adopted in trying grapes in any new locality, for the purpose of ascertaining the adaptation of the locality to grape-growing.

In regard to this matter of protection, I think the subject deserves more attention than it is now receiving. In many localities good crops can be raised by simply laying down the vines and covering them slightly with earth, where they could not be raised if this care were not taken. And in other localities, where the vines are not apparently injured by the cold, a larger and better crop of fruit will frequently be obtained. In every vineyard, I think it would be a desirable practice to lay down a few vines every year. If a severe winter should occur, and kill all the exposed vines down to the ground, as at Cincinnati a year or two ago, the protected vines would afford a crop which would sell at large prices.

Directions for training may be concisely given as follows: The soil should be prepared by draining, plowing, subsoiling and staking, and the vines planted as already described. During the first season let only one cane grow from the vine planted, and this should be from the lowest bud that starts. Keep the vine tied to the stakes. It should receive but little or no pinching. The object for the

first season is to get strong, well established plants, that is, plants with an abundance of roots; and the amount of root which a plant makes is in proportion to the amount of leaves and branches above. In the fall cut the vines down to within a foot of the ground.

During the second season allow two canes to grow. These should be from the two lowest buds which start with vigor, it being desirable to keep the stump as short as possible, so as to facilitate covering. The laterals may be pinched when a foot in length, and again after every two additional leaves. Each cane may be allowed a bunch of fruit without any injury. In the fall, cut the two canes down to two buds each.

During the third season, allow four canes to grow. If any accessory buds formed near the head of the stump should throw out vigorous shoots, take these for the canes; if this should not be the case, then the four canes can be obtained from the buds—two on each of the last years' canes—left for the purpose. Two of the canes may be trained to the stakes, and allowed to bear two or three bunches each; the other two canes may be trained to the slats, (which should have been put on in the spring.) No fruit should be grown on these last two canes. In the fall cut away entirely the two canes which have fruited; on the other canes shorten in the laterals, being careful not to injure the buds at the base. These two canes may be laid down upon the ground, and a little dirt thrown

over them. Or they may be left on the trellises, if protection is deemed unnecessary.

During the fourth season, two new canes are to be grown, which will doubtless be afforded by accessory buds. These are to be trained to the slats, while the two canes of last season are to be fastened to the stakes for fruiting. Each bud will probably produce a fruit branch, which will bear from three to five bunches. These branches should be stopped at the second leaf beyond the last bunch of fruit. It is better not to allow more than about twenty bunches of fruit to a cane. The loss in the number of bunches will be more than made up in the increased size and superior quality of those which remain. When flower clusters are to be removed, it should be done as soon as they make their appearance, as the process of flowering is very exhaustive to the plant.

The fall has been mentioned as the proper time for pruning. In localities where the winters are severe, the tips or exposed ends of vines are frequently injured, even when the remaining parts receive no apparent harm. For this reason the canes ought not to be cut back close to the bud that is designed to grow, as by so doing it would frequently be destroyed. It is better to leave an extra bud or two, to be cut away in the spring, after the severe cold of winter is passed. By this means the buds designed to grow are left vigorous and strong. This second pruning, or any spring pruning, should not be delayed until the sap

has commenced to move, as it flows so freely from the wound as to seriously injure the vine. When winter protection is given the pruning may be completed in the fall.

A cut is given at the beginning of this chapter showing the appearance of two vines at the beginning of autumn. A careful inspection will give a clear understanding, if the text has not given it, of the mode of pruning and training. The fall pruning consists of cutting the laterals from the canes on the slats. These canes are to bear the first next season. The canes now in fruit must be cut entirely away. The point requiring the greatest care is to secure vigorous buds from which new canes are produced next year. Nearly always there will be found several well developed accessory buds on the head of the stump at the base of the canes. All those which commence to grow, must be rubbed off, except the two strongest. These will furnish the new canes. In case a vigorous cane is not furnished by accessory buds, one may still be had from the lowest bud on the cane which is to bear fruit. It is seldom that a necessity of this kind occurs. When it does, all trouble for the succeeding year is usually obviated by the subsequent formation of abundant accessory buds.

It will be seen that the growing canes on the slats are longer than the fruiting ones. This is a positive advantage as the increased length which is afforded the cane during its season of growth, makes it all the stronger, and what

is more, adds to the health and vigor of the vine. At the fall pruning, these canes may be shortened to the length of the upright stakes.

CHAPTER XIII.

MORE ABOUT PRUNING AND TRAINING.

In this chapter I propose to give as concisely as possible the plan pursued with my last few acres of vineyard. The plan is essentially the one adopted by most grape growers in my vicinity, and generally throughout the whole grape region in which I am situated. The plan possesses some advantages over the one elsewhere described and illustrated in this work, if grapes are grown in large quantities; but for only a few vines, or a very small vineyard, this remark does not apply.

TRELLIS.

The trellis used is made of wire and stakes, or small posts. The posts are usually split out of oak, chestnut, or other durable timber, and should be large enough to give strength to the trellis. The posts are set eighteen feet apart in rows, which run north and south, so as to

give a more uniform exposure of the grapes to the sun. The posts should be long enough so as to be from four feet eight inches, to five feet in height, after being set. Four wires are then stretched along the posts, being fastened to each post with a staple, which is driven in so firmly that the wire is prevented from slipping through. By this means the wire is prevented from sagging in one place more than another, and the strain of contraction and expansion by heat and cold is evenly distributed among the posts. The two end posts should be larger than the others, and braced so that the contraction of the wires will not loosen them. The first wire is placed about fourteen inches from the ground, and the others the same distance apart. This brings the upper wire about four feet eight inches from the ground. Sometimes only three wires are used, but I prefer four, as it permits tying up the vines more thoroughly. I think this advantage more than compensates for the extra expense. The wire used is No. 9, annealed iron. If the trellises are eight feet apart, and four wires are used, about twelve hundred and fifty pounds will be required for an acre. As to the proper distance apart for the trellises, there is a difference of opinion. I think eight feet the most desirable, but would increase rather than diminish it.

FIRST YEAR.

The vines are planted six feet apart in rows, using all the care elsewhere described. If the vines are six feet apart, there will be three between each two posts of the trellis. Sometimes the trellises are put up as soon as the vines are planted. In this case the vines are kept tied up the first season; otherwise they are left to trail upon

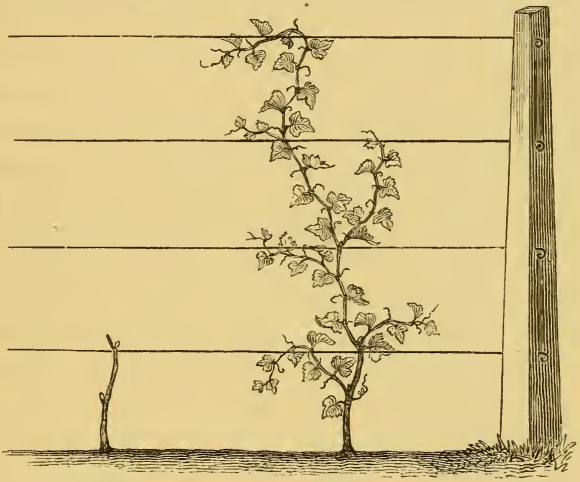

Fig. 1. Fig. 2.

the ground. According to my experience, the vines do nearly as well in this way as when tied up, but of the two methods the latter is preferable, although additional labor is required. No pruning or pinching is desirable during the first year. I do not think it adds in any way to the

size or vigor of the plant. At the end of the first season the vine will probably have reached the top of the trellis, and will have lateral branches of considerable size. It will have something of the appearance represented in Fig. 2. At the fall or winter pruning the plant is cut down to two strong buds, and will now appear as shown in Fig. 1.

SECOND YEAR.

During the second year a cane is produced from each of the two buds left at the last pruning. The canes may

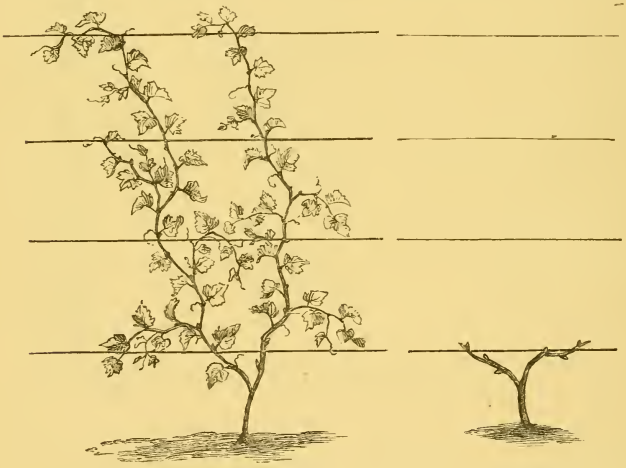

Fig. 3. Fig. 4.

be treated like the one cane of last season, except it would be well to pinch back, once or twice during the season, the stronger laterals, so as to develop as fully as

possible the two main canes and their buds. All severe pruning and pinching must be guarded against, here as elsewhere, for fear of forcing the buds designed for next season, into premature growth this season. This is particularly the case as the vines get older. Fig. 3 is intended to represent the appearance of the vine at the end of the second season. At the fall pruning, the two canes may be cut back to three buds each. Fig. 4 shows its appearance after pruning.

THIRD YEAR.

Six buds were left at the last pruning, from which six canes can be grown during the third year. Each of these canes will probably bear two or three bunches of fruit each, which would give twelve to eighteen bunches to the vine. There is danger of the vine being injured by overbearing, on which account the bunches should be thinned to not more than ten or twelve to the vine. The laterals may be pinched back a little more closely than during the last season, and the canes may be stopped when they have reached a little beyond the height of the trellis. Fig. 5 shows the appearance of the vine at the end of the season. The subsequent pruning consists of cutting three canes down to two buds, and shortening the three remaining canes to about three feet. The vine will then appear as shown in Fig. 6.

FOURTH YEAR.

The three canes, left at the last pruning, will this year produce branches, each of which will have two or three bunches of fruit. These branches may be stopped at the second leaf, beyond the last bunch of fruit. Besides these three canes, six buds were left at the last pruning. From each of these a cane can be produced for fruiting during

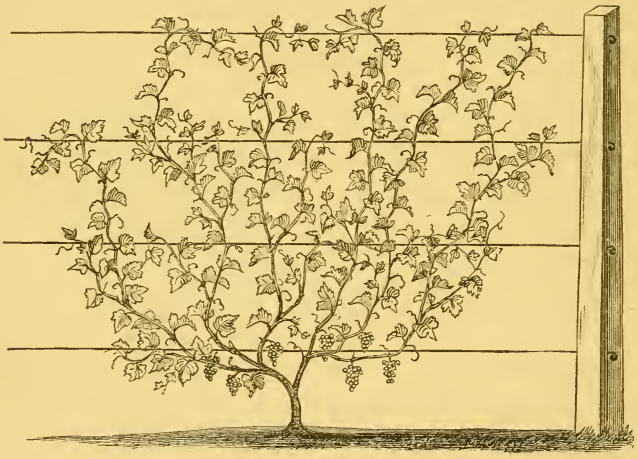

Fig. 5.

the fifth year. It is not well to allow too many bunches to the vine. A larger amount and better quality of fruit is obtained by judicious thinning. As to the amount of thinning, no directions can be given, as it depends largely upon the strength and vigor of the vine, and the variety

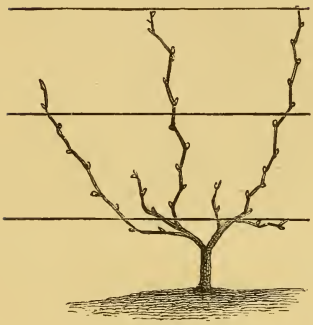

Fig. 6.

of grape. In the fall, the three canes, which have fruited, may be cut entirely away; and the six canes, which are to fruit next year, cut back to about three feet.

SUBSEQUENT MANAGEMENT.

The principal point in subsequent management is this, to produce each year from four to six strong and vigorous canes for fruiting the succeeding year. To ensure the production of these canes, care must be taken at the fall or winter pruning to leave sufficient buds for the purpose; but very frequently canes will be produced from adventitious buds, lower down on the vine than those from buds left for the purpose. In this case, the cane from adventitious buds should be left for fruiting; and it is always de-

sirable to produce new canes as low down on the vine as possible. The number of fruiting canes will depend upon variety of grape and strength of vine; but, as a general thing, from four to six to each vine will be sufficient. By care and attention in making the most of every strong adventitious cane, the entire vine may be renewed every six or eight years to within a few inches of the ground. In this way a great number of years will pass, and the stump of the old vine will not have reached an objectionable or inconvenient height. As a general thing it may be set down, that four-fifths of a vine in full bearing, is cut away at the fall pruning. For instance, suppose the vine has five canes which have fruited, and five canes which are to fruit the next year. The fruited canes are cut entirely away; the canes for fruiting are cut back to three feet, and any laterals which may have attained any size, are cut off. The first reduces the vine one-half; the second about one-fourth; and the last usually enough to make the whole reduction amount to four-fifths.

CHAPTER XIV.

AUTOBIOGRAPHY OF A VINE.

On one occasion, not long ago, I visited a friend who has a small number of vines which are perfect models in form and vigor. One of them was particularly remarkable for its symmetry. "If that vine," I remarked, "were to tell its own story, it would be one of great care and untiring attention." "Not very great," my friend replied; "and as to telling its own story, I see no reason why it should not. I frequently talk to it while engaged in the work of bringing it up in the way it should go." Not many days afterwards I received the following paper, bearing the title I have placed at the commencement of this chapter:

"When very young, I know not how old indeed, but nearly as far back as my memory goes, (you would have called me a *bud* in those days,) I used to take great de-

light in the anticipation of future enjoyment. My father was a venerable vine, kindly in disposition, and well to do in the world. His roots penetrated the soil far and wide, where abundant nourishment for his whole family was easily gathered. What a splendid time, so I soliloquised, will I have the whole of next season; (it was now fall,) nothing to do in the way of obtaining food for myself, no searching the dark soil here and there for delicate tit-bits —nothing of the kind; my venerable papa will do all that. My only task will be to put forth a few leaves, and digest the nourishment which will be so abundantly furnished. The gentle summer showers will refresh me when I am thirsty, the genial sunshine will warm me when cold, and the cooling breezes will fan me when the heat becomes oppressive. What a continued scene of enjoyment will my life present! I can scarcely await the slow approach of spring, so that I can enter upon it. But the force of circumstances were quite overpowering; so I settled down for a long winter's repose.

But alas for any calculation which can be made regarding the affairs of this transitory world. I had scarcely fallen to sleep when awakened by the noise of voices in conversation. They came from the gardener and his assistant. "Here, Patrick," said the first, "cut all of these vines through here down to two buds, and save all the well-ripened wood for single bud cuttings." "Sure, and I'll do that same," was the willing response of the other.

Not many minutes had passed before the sharp knife of Patrick had taken me and many of my brothers away from the protecting care of our respected ancestor. Where now, thought I, are all the fine calculations for next year's enjoyment? But I said nothing, consoling myself with the reflection that the society of my brothers was still left me. Some time after a number of us were taken up and carried into a propagating house, a strange looking building with a glass roof. The air was warm, almost uncomfortably so; on one side was a long bench, covered with sand, made still warmer than the air of the house, by means of what they called bottom heat. I had scarcely made these observations, when the self same bloodthirsty Patrick came along with his knife and deprived me of my only remaining consolation, by separating me entirely from all my kindred. I recalled to mind an old saying that misfortunes never come singly, and thought what a fine illustration my fate afforded of its truth. Presently they took me to the bench, and putting me in the sand in a slanting kind of way, covered me completely up. Buried alive, thought I; and at the same time wondered why they failed to make this last misfortune complete by not putting me in head downwards. But they did not do it, and herein was a slight shadow of consolation, only it was so dark in there that I could hardly see the shadow. For several long days I kept very quiet, waiting for something to turn up. But nothing happened, or seemed

likely to. So I put up a leaf or two above the sand to see what was going on. Among my first experiences was a drink of water which Patrick was kind enough to give. What a comment is this, thought I, upon those anticipated enjoyments! Instead of the gentle summer showers which were to refresh me all so nice, the incorrigible Patrick comes along and gives me a little sprinkle from a tin watering pot! And thus it is, frequently, in life. The fine castles that we build, grand and gorgeous to look upon, too often in the reality are only plain houses, and even these sometimes with broken windows and a leaky roof.

Before many days I began to get quite hungry. I was now dependent on my own resourses, not having the kind papa to get me food as I had anticipated. So I put out a few roots in the sand to see what could be found, and poor picking it was you can rest assured. I believe I should have starved to death if it had not been for the food my venerable papa had surrounded me with before I was taken from his hospitable trellis. But I had hardly commenced wondering what would become of me, when who should come along but Patrick, and taking me from the sand, place me in a nice little pot, filled with the richest soil. What a feast was that—a regular thanksgiving. There was such a nice lot of food close at hand, that being thrown on my own resources did not seem so bad a thing after all. I grew quite rapidly, and it was not long

before I felt crowded in my new abode. My roots had nearly filled the pot, so that there was hardly a chance to stir. This inconvenience had not lasted long, when the inevitable Patrick, whom I had learned to look upon with some degree of favor, took me out and placed me in a larger pot. This was a sensible operation, as I had outgrown the old one much as a school boy outgrows a pair of shoes.

In my new abode I continued to grow strong and vigorous. It was not long, however, before spring arrived. I was now taken from the pot and placed with a great number of companions in a bed out of doors. This bed had been prepared with the greatest care. It was mellow, and dry and warm, and the supply of food was so abundant that it required no great exertion to get all we wanted.

On the whole we passed the summer very pleasantly. They gave us but little care, and I should say that we did not need more, because many of us were at least five feet tall at the close of the season. When we were planted, they gave us a good mulching of coarse barn-yard manure, and then let us shift for ourselves, except that they pulled out a few large weeds which made a very obvious display of large capacities for stealing our food. At the approach of cold weather they cut us all down to about four buds, dug us out of the bed, and heeled us in, covering us afterwards entirely with earth.

Early next spring, some of us were taken out, packed

in moss, and sent some distance by rail. Without any remarkable incidents on the journey, we arrived here, and I was shortly afterwards planted in the very spot where you see me now.

The first summer passed very pleasantly. The soil must have been nicely prepared. It was so exceedingly mellow that my roots could get around with the greatest ease. There was a little lime which I was glad to get hold of now and then, because I am as fond of it as most people are of salt. During the season I grew pretty much according to my own notion, except when they thought a lateral was getting a little too long, they stopped it. In the fall they came along with pruning shears, which they used in a careless sort of way, as is proven by the fact that they cut me back to only fifteen inches in height. A mighty pretty way that is to barber a fellow, thought I. But as it seemed to be quite the fashion among all my neighbors, I did not so much care.

The next spring they came along and rubbed off all but my two upper buds. From these I produced two very stout canes during the season, the laterals being kept pretty closely pinched in. Feeling somewhat ambitious, I produced this season a couple bunches of fruit, whereat I felt as much pride as a boy does with his first whiskers, or a hen over the first egg. The gardener who had charge of me in those days, felt very much gratified. And I suppose he was entitled to some reward for all the trouble he had

been to in taking care of me. But if he had left me more alone, and not cut and pinched me so much, I am sure I should have been equally well gratified. Perhaps trials and tribulations are necessary to the proper development of character. It is at least a true philosophy of life to count all afflictions as blessings in disguise. And if these disguises, as sometimes happens, are so well put on that the blessings are not recognized, we must still exercise our faith that they are there, and that all things are working together for good. In the fall these two canes of mine were shortened to four feet.

The next spring, this was my third year in the vineyard, they built a trellis of five wires attached to posts, so that the lower wire was fourteen inches from the ground. On this lower wire they fastened the two canes, in opposite directions, and called them arms. And now what do you think was done next? All of the buds on the underside of the arms were rubbed off; but from each of the buds on the upper side a cane was allowed to grow, making six canes on an arm. These canes were tied to the trellis as they grew, and the laterals kept pretty well shortened in. Feeling somewhat in the fruiting way, I produced one or two bunches of fruit on each cane, about twenty in all; but I did not feel so proud of them as I had done of the two bunches the previous year. At the fall pruning, the gardener cut off all the canes down to two buds. This bit of cane which he left on he called a spur. And there

I stood, the whole winter through, with arms outstretched to their fullest extent. It would have become quite fatiguing had not the trellis afforded me a good support.

The next, the fourth year of my vineyard life, a cane was produced from each of the two buds left on the spurs, making a dozen canes to an arm. These were treated precisely as those of last season, but the amount of fruit I produced was very much increased. I think there must have been some sixty or seventy bunches in all. In the fall, each alternate cane was cut entirely away, and the rest down to two buds.

From that day to this my life has been simply a repetition of my fourth year's experience. Many good crops of fruit have I borne, but I do not feel exhausted, or that old age is creeping upon me. Indeed, when I recall to mind the stories I used to hear father tell of some of our ancestors who had rejoiced in the summer sun of half a dozen centuries, the notion creeps over me that I shall live and bear my fruit for at least a hundred years to come."

CHAPTER XV.

BRIEF EXPOSITIONS.

In this chapter I propose to consider very briefly some matters connected with grape culture, a few of which have been glanced at, but none of which have been dwelt upon at great length. Indeed, it is not designed to make this work a scientific treatise; there are already enough of those, and very good ones, too. Nevertheless, if the purpose is successful of making this record of my experience plain enough for all to understand, I do not see why it may not serve as a guide for others, whereby they may reach a degree of success in grape-growing equal to my own.

Tying.—In tying up young and tender shoots, or even mature canes, care should be used against tying too tightly, as the free flow of sap may be obstructed. I obtain a supply of material for tying from basswood bark. In the

spring, a basswood tree from eight to ten inches in diameter, of which my woods afford an abundant supply, is felled, the bark peeled off and sunk in the lake, (a running stream is better,) so as to be entirely covered with water, being fastened down with stones. In two to three weeks the sappy and glutinous substances of the bark are soaked out, so that it can be separated into the fine and delicate layers of which it is composed. No material could be better than this for the purpose of tying. When it can not be obtained, any soft string or stout woolen yarn may be used.

Packing Fruit.—The boxes used in packing grapes for shipping, are of different sizes, holding from five to twenty-five pounds. They are sold according to their capacity, usually at one cent a pound, a five-pound box costing five cents, and so on for larger sizes. Establishments for their manufacture are found in all the principal grape regions. In packing, the top is first nailed on, and a sheet of thin, white paper put in; whole bunches of grapes are first put in, being packed as closely as possible without jamming them. The vacant places left, after putting in as many whole bunches as the box will contain, are filled with parts of bunches, and lastly with single grapes, so that all the space is occupied. Another sheet of paper is now laid on, and the bottom nailed down. By this means, when the boxes are opened, only entire bunches are found at the top.

Picking for Wine.—Grapes intended for wine should be left on the vines as long as possible without danger from frosts. The peculiar qualities necessary to the manufacture of a good wine, are only developed, or at least, are developed most largely late in the season. In picking, the utmost care should be employed in throwing out all diseased or imperfectly ripened berries.

Systems of Pruning.—The different systems of pruning and training described in the grape books are almost innumerable. Many of them are very fine, if we are to judge from the illustrations. But I apprehend that the wonderful success with which many of them are carried out is more imaginative than real. Nevertheless, the grape is the most tractable of plants, and can be worked into a wide variety of forms; but those only are best which are most simple.

Time of Pruning.—Much latitude can be taken as to the time of pruning. In the fall, soon after the leaves have fallen, I consider best. The winter or early spring answers very well, but it should never be delayed until the sap has commenced to move. When cuttings are to be made of the wood, early fall is the only good time to prune. In the cooler regions, where protection is not adopted, the precaution against too close fall pruning, elsewhere given, must be observed.

Effects of Pruning.—One effect of pruning, which is the desired one, is to force the vine into a precocity of

bearing which it does not have in its wild state; but another effect, and an undesired one, is the engendering of disease. This last effect is of least frequent occurrence in those systems of training which requires the least pruning. Hence, excessive pruning should be guarded against; but it does not follow that no pruning at all would be a desirable system of culture. What we desire of the vine is that it shall subserve our wants. This it will not generally do in its natural state, or when left to its natural tendencies; artificial means are therefore employed to bring about the desired end.

Vines without Pruning.—Nevertheless, I have seen vines succeed admirably when left to themselves. Being planted at the side of large trees, they climbed to the top, and bore rich treasures of fruit among the branches. And these vines were free from disease. But it must be remembered that with all varieties, and in all localities, these results will not obtain. The opposite is the rule; this the exception. Still, to all who can do so without inconvenience, I would recommend a trial of this method with a few plants.

Training near the Ground.—They tell me that in Minnesota, though I have never seen it, they have a way of training their vines upon trellises only a few inches above the ground, much as they would train melons. The claim is, that the grapes are ripened by the radiated heat of the soil, when they would not be on an upright trellis.

Farther than this, the fruit may be easily covered, should an untimely frost occur. A small quantity of fruit might be grown in this way. A trial of it would be worth making in a cold locality.

Diseases.—The grape, in common with all cultivated fruits, is liable to disease. In any given locality, it seems to confine itself to certain varieties; while in other localities these varieties may wholly escape and others be attacked. My vines have never been diseased until the past season, when a few were attacked by mildew, and a few by rot. The injury, however, was very slight, although a more unfavorable season could scarcely occur. Most every thing mildewed more or less—even the growing corn in the field to some extent. I apprehend there are no remedies for any grape diseases. Prevention is what should be looked to. It may be effected by thorough underdraining and careful tillage.

Insects.—There seems to be no animal or plant which is not designed for other animals or plants to live upon. I remember on one occasion seeing a beetle in my hot-bed, so loaded down with lice that it could scarcely move. They were literally eating it alive. But what was my surprise on looking closer, to see upon these lice numerous smaller ones engaged in the process of devouring them. I do not know how much farther the system would have been revealed by the aid of the microscope. The vegetable world has to stand a double portion, it being not only

preyed upon by other vegetables, as in the case of mildew, but by animals as well. At present, the enemies of the grape, or rather the lovers of the grape among the insect tribes, are not numerous enough to be seriously destructive. The farmer should first learn to distinguish between those insects which prey upon others, and those which prey upon plants, and then wage a ceaseless war of extermination upon vegetable eaters of every kind, and in all stages of their development. Let the insects which ravage upon any crop once get the upper hand, and it were a hopeless task to quell them. Kill one insect this year, and next year it may save the ravages of a thousand. And it matters not by whom it is killed. A bird's method is as effectual as any; therefore save those birds which are insect eaters.

Planting.—I know of no better method of planting than the one I pursued with my first acre of vines. It might be done with half the care and trouble, but such slackness would not be profitable.

Time of Planting.—I have always planted in the spring, and think that time the best for all regions where the winters are severe. As a general thing it matters little as to time, if the planting be well done. With sufficient care, a plant may be moved in the height of summer without injury. Whether you plant in spring or fall, be sure to cut back the top so as to fully balance any loss the root has sustained.

Manure.—I believe in manure. Plants must have food,

but kind and quantity should be considered. A giant may eat largely of bacon and find it agreeable, but a dwarf might get the dyspepsia. The cultivated vine is a dwarf, as you may know by comparing it with a wild one. This is one reason why greater care must be exercised with the quality and quantity of its food than is necessary with most plants. Other reasons have been elsewhere given. Give your vines food; if there be not enough already in the soil, then supply it. But do not give too much; and be sure the quality is right.

Situation—This is of first importance. It matters not how great skill may be employed, a vineyard can not be successful unless nature has made the situation favorable. Still, a few vines may be grown by most any one who has a house. But a vineyard as one's employment, and a few vines for the gratification of one's self and family, are quite different things.

Preparation of Soil.—This is of second importance. The different processes of preparation are arranged according to relative importance in this way. Fineness of tilth; underdraining; subsoiling. There must positively be fineness of tilth, else the roots become exhausted in clambering over and around big lumps in search of food. On the other hand, if the soil be the least wet, there can be no fineness of tilth without underdraining, so that the soil may become dry. The one is a corollary of the other. The truth is, all the important processes of grape culture,

or any other branch of farming, are, as it were, dove-tailed together, and any one of them were well nigh useless without all the others.

Soil.—This is of third importance. I should arrange the different kinds of soil, according to their relative importance, as follows: Clay; clayey loam; heavy clay; sandy loam; light sand or gravel; alluvium. By the first I mean a moderately strong clay, but not the heaviest. Any soil is greatly improved by lime.

Distance apart.—My first vines were six feet by six; those more recently planted are six feet by eight. I think the last distance best for vineyards.

CHAPTER XVI.

VARIETIES.

One of the most remarkable features of grape culture is the adaptation of certain varieties to specific localities. The same grape may be worthless in one place, good in another, and the best of all varieties in a third; or it may succeed in a given locality for a few years and then become a failure.

The Catawba and Isabella are the varieties planted in the Lake Erie regions, to the almost total exclusion of all others. Were I to extend my vineyard, I should plant equal quantities of these varieties. Still, the Catawba has well nigh failed from disease in the Cincinnati region, and has been superseded by other varieties at Hermann. It is possible that it may meet a similar fate here, but at present it is our most profitable grape.

Full account of all the varieties, which are very numer-

ous, are given in the grape books. In testing the adaptation of any new locality to grape culture, it would be well to plant a number of different varieties, selecting those which have obtained a reputation of being successful in different regions. It would be a hazardous proceeding to plant a vineyard in a region where the grape is not positively known to be successful. A trial should at first be made on a small scale, which will be rendered all the more definite and decisive by including a number of varieties.

The following are the varieties which I have planted: Catawba, Isabella, Delaware, Clinton, Concord, Anna, Diana, Rebecca, Allen's Hybrid, and six of Roger's Hybrid. Some of them have been recently planted, and have not commenced bearing. I am, therefore, unable to judge of their success. But of all the varieties with which I am acquainted, the Delaware combines more good qualities than any other. Its earliness renders it well adapted to the more northern and colder regions. In the garden, or on a small place, when only a few vines are to be grown, this should be the leading variety.

For trial in new localities, the following would perhaps be most desirable: Delaware, Concord, Catawba, Isabella, Hartford Prolific, Norton's Virginia, Clinton, and of the newer sorts, Adirondac, Creveling, Iona, and Israella.

CHAPTER XVII.

NEW GRAPE REGIONS.

In most regions where the grape has been found successful, land is held at so high a figure as to preclude its purchase by men of limited means. But there are doubtless hundreds of other localities where the grape has not been introduced, which will ultimately become as successful as any now known. On many of the steep and rocky hillsides of the New England States, where the wild vine now clambers in rich luxuriance, bearing its heavy burthen of fruit, there are doubtless many places where the cultivated vine might be grown with very satisfactory success. The same may be said of the shores of hundreds of small lakes scattered throughout the country, where the volume of water is sufficient to exert an ameliorating influence upon the climate. I have in mind a small lake, only a mile in length, and of still less breadth, which so retards

the autumn frosts that peaches can be ripened upon its shores, while at the distance of only two or three miles, they are almost always destroyed. In one or two instances, also, where the corn crop has been destroyed a mile or two from the lake by extraordinarily early frosts, in the immediate vicinity of the lake it has been fully matured. Such a locality would doubtless be congenial to the grape. And I can scarcely conceive of a pleasanter spot for a rural home, with all its quiet enjoyments, than the shores of some of our beautiful inland lakes, where the chief employment of the husbandman might be the culture of the vine.

WHO SHOULD PLANT GRAPES?

The grape is so luscious a fruit, and grape-growing so pleasant, and withal, so profitable an employment, that I would say to every one who is the owner of a farm, or even a garden of the smallest dimensions, try a few vines: the task will be but slight, and it may lead to more successful results than you have any conception of. True, in very many instances, failure would be the result; but the chances of success are numerous enough to warrant the undertaking.

There is no plant like the grape to adapt itself to all sorts of localities. No place could suit it better than the sunny side of a building, near to the wall. Here it would luxuriate, searching out its food from places which other

plants would hardly find, and elaborating it into the richest fruit. A fruit tree, a currant bush, a hill of corn, or even a flower, would hardly find a foothold in such a place for want of room. Plant one vine in the best spot which you can find; it will appreciate every care and attention which you bestow upon it, and will do its best to return to you an abundant reward. If it succeed in this, you will presently bring it companions to keep it company.

CHAPTER XVIII.

ANCIENT METHODS OF CULTURE.

I have been somewhat interested and instructed by a study of ancient methods of culture. One is not a little surprised to find, as the result of his studies, that our knowledge of horticulture, of which we are not unfrequently ready to boast, is in many departments scarcely a step in advance of theirs who lived thirty centuries ago. In the matter of grafting it is probable that our skill is not equal to that of the ancients. As regards the vine in the old world, the methods of culture seem to have changed but little since the days of Hesiod, who wrote largely upon the subject three thousand years ago. This was more than a thousand years before the days of Pliny, whose own voluminous works are eighteen centuries old, but for soundness and accuracy in many particulars have hardly been surpassed up to the present time. It is true

that these old writers incorporate strange notions and ridiculous explanations into their discourses; but the rules laid down, and the directions given, are generally the ones which, even at the present day, lead to success.

Pliny writes largely upon the vine. His directions for its culture are almost as complete as any that can now be given. He indulges in long discourses upon the great excellence of numerous varieties, and in one place gives the poet Virgil a sound scolding for mentioning only fifteen varieties in the Georgies. As an illustration of what ought to be done, he describes ninety-one varieties of grapes, and fifty of wine.

One marked feature which distinguishes ancient from modern culture, is the training of vines to trees, a method occasionally adopted by the ancients. Virgil tells us how this ought to be done:

"Be mindful when thou has intombed the shoot,
With store of earth around to feed the root;
With iron teeth of rakes and prongs to move
The crusted earth, and loosen it above.
Then exercise thy sturdy steers to plow
Betwixt the vines, and teach each feeble row
To mount on reeds and wands, and upward led
On ashen poles to raise their forky head.
On these new crutches let them learn to walk,
'Til, swerving upwards with a stronger stalk,
They brave the winds, and climbing to their guide,
On tops of elms at length triumphant ride."

Says Pliny upon this point: "In Campania they attach the vine to the poplar; embracing the tree to which it is thus wedded, the vine grasps the branches with its amor-

ous arms, and as it climbs, holds on with its knotted trunk till it has reached the very summit; the height being sometimes so stupendous that the vintager, when hired, is wont to stipulate for his funeral pile and grave at the owner's expense."

Virgil continues his discourse by giving directions for pruning:

"But in their tender nonage, while they spread
Their springing leaves, and lift their infant head,
And upwards while they start in open air,
Indulge their childhood, and the nurselings spare;
Nor exercise thy rage on new-born life;
But let thy hand supply the pruning knife,
And crop luxuriant stragglers, nor be loth
To strip their branches of their leafy growth.
But when the rooted vines with steady hold
Can clasp their elms, then husbandman be bold
To lop the disobedient boughs that strayed
Beyond their rank; let crooked steel invade
The lawless troops, which discipline disclaim,
And their superfluous growth with vigor tame."

Among the ancients the vine was frequently called a tree, an appropriate term so far as the size of many of the plants is concerned. Pliny says that "in Populonium we see a statue of Jupiter formed of the trunk of a single vine, which has for ages remained proof against all decay. At Metapontum, the temple of Juno has long stood supported by pillars formed of the same material; and even at the present day we ascend to the roof of the temple of Diana by stairs constructed of the trunk of a single vine."

Many ancient naturalists, as well as modern travelers, agree in their accounts of the immense size and great age which the vine attains in Eastern countries. Pliny gives an account of a vine six hundred years old. Miller, in his work on the vines of Italy, says that they are considered young at a hundred, and that many have been in cultivation upwards of a hundred years. With us the vine does not seem to attain so great a size as in Oriental countries. It has, however, been observed of large proportions in the rich alluvial soil of the Ohio Valley, several having been measured which were three feet in circumference at the base of the stem, with branches two hundred feet long, encircling and festooning the tops of huge poplars and sycamores. An account has recently been given of a vine in California which has a trunk ten feet in circumference. It is stated to have had seven thousand bunches of grapes upon it at one time, the estimated yield of fruit being eighteen thousand pounds.

The grape attains its greatest perfection and complete lusciousness in Syria and Persia, and upon the declivities of the Himalaya and Caucasus mountains. It was in this region, in the beautiful Garden of Eden, where Adam and Eve first pruned the vine, and were doubtless

* * * "bold
To lop the disobedient boughs that strayed
Beyond their rank."

Milton recounts the daily labors of this venerable pair in the following language:

> "On to their morning's rural work they haste,
> Among sweet dews and flowers, where any row
> Of fruit trees, over woody, reached too far
> Their pampered boughs and needed hands to check
> Fruitless embraces; or they led the vine
> To wed his elm; she, spoused, about him twines
> Her marriageable arms, and with her brings
> Her dower, the adapted clusters, to adorn
> His barren leaves."

"From the remotest periods of antiquity, the vine has been celebrated as a type of plenty, and a symbol of happiness. The pages of Scripture abound with allusions to the vine as emblematical of prosperity; and it is declared, in describing the peaceful and flourishing state of the kingdom of Israel, during the reign of Solomon, that Judah and Israel dwelt safely, every man under his own vine and under his fig tree."

The history of the vine is almost or quite as old as that of man. It has followed him as he has spread throughout the world, and is now found in almost every clime. In our own country, the first organized efforts at vine-growing date back more than two hundred and thirty years. These first efforts, however, met with little success, being confined almost entirely to European varieties. It was not until about forty years ago that the introduction of the Catawba, a native seedling, gave an impetus to grape culture, and brought about the wide-spread business

which is receiving so much attention at the present day. Hundreds of new varieties have been originated since the Catawba was introduced; but none of them, perhaps, are so generally successful or so well liked. Its praises are thus sung by Longfellow:

"Very good in its way is the Verzenay
Or the Sillery, soft and creamy,
But Catawba wine has a taste more divine,
More dulcet, delicious and dreamy.
There grows no vine, by the haunted Rhine,
By the Danube or Guadalquivier,
Nor island or cape, that bears such a grape
As grows by the Beautiful River."

CHAPTER XIX.

THE RESPONSE.

"* * * Does the "record" answer the inquiry which you seem to make? "Too late to go a-farming?" So many things are to be considered that one can hardly say. In your meditation upon the subject, above other things, one should be kept in mind. Can you infer it to be aught else than your lamentable bachelorhood? Why Providence should have visited you with such a judgment, I know not. But it is never too late (so wise men say) for reform and repentance, even to the eleventh hour; and how much more available must the eighth hour be, which is scarcely passed. With a helpmeet, a dear companion of your joys and sorrows (and there will be both) then look ahead.

If you can find within you the least germ of love for a rural life, my advice is, nourish it with care; and if it flourisheth, then cast around for some country home which shall be congenial to your tastes. The change would be

a wide one from your editorial quill, and your dealings in politics, in which every one must need engage who is connected with the partizan press. I have never disguised the estimation in which I hold politics, with its dark and devious ways; and you know well enough my want of sympathy for those who experience its tribulations. For me, a political atmosphere is not congenial. I get my fill of it once a year when I go down to the village to put in my vote. It is seldom that the inevitable Jacobs fails to exhibit himself at the grocery corner expounding to Patrick's evident gratification, the glorious principles of the Constitution; being at all times ready to enforce his arguments with liberal potations of so-called Bourbon, and a moderate supply of filthy lucre. "And is it no more ye would be after paying me?" says Patrick; "wasn't it a half dollar a vote ye gave to me in the auld days of silver? and isn't it worth twice that now?"

The truth is, my friend, the whole slough of politics needs a thorough underdraining, to let off the stagnant waters, and admit a purer air; this done, ashes and lime, and purifying salt should be applied with a liberal hand. It is possible that by this reclamation, good fruits, though not of the best, may be produced.

In the farm life there are both prose and poetry; but both are good. The pure air, and bright skies, and warbling birds, and blooming flowers, are not all imagination; they are real, and he who will may enjoy them. It is a

wrong notion that farm labor is not compatible with refinement; the dirty boots and coarse blouse in which you drive your team afield, do not militate against the finest slippers and most spotless linen when you repair to the drawing-room. But is there room for mental culture? In no employment is there more, except it be a purely professional one. Or perhaps I should say, might there be more. At present, farmers work too much, more than is needful or profitable. From sun to sun is too long for any man to work. But we are making progress; books, and papers, and magazines, are everywhere, bringing with them thought and refinement. On how many tables among my neighbors would you expect to find the *Atlantic?* You would be surprised that the number is so great. The truth is, there is already more of social refinement among people who work—actually work with their own hands—than you of the city seem to suppose.

For my part, I believe in farming. Should you conclude to try your hand at it, I hope you may meet with no serious disappointments, which you will not, if you love, as I do, to go out and work "among sweet dews and flowers." * * *